

'It's Important to
Know In Time'

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The Newspaper
of the Industry

Air Conditioning & REFRIGERATION



NEWS

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'Written To Be
DETROIT
Read on Arrival'Issued Every Monday
at Detroit, Michigan

APRIL 27, 1942

Vol. 35, No. 17, Serial No. 684
Established 1926.

Repair Parts Order Covering Commercial Refrigeration Issued by WPB

All-Industry Conference Will Reveal Where Industry Stands

**Chief WPB Men
For the Industry
Speak May 11-12**

Clinics Will Explain
Correct Applications
Of Priority Orders

CHICAGO—Men in industry and the government who know the most about the place of refrigeration and air conditioning under present conditions will explain it to YOU—if you are a member of the industry and in attendance at the All-Industry Meeting and Conference Clinic of the Air Conditioning and Refrigeration Industry Monday and Tuesday, May 11 and 12, at the Hotel Stevens in Chicago.

Monday and Tuesday mornings will be given over to formal talks by speakers who will cover the whole range of the problem of the refrigeration industry's relation to the War program and maintenance of essential civilian equipment.

On the afternoons of Monday and Tuesday there will be "Conference Clinics" in the Exhibition hall of the Stevens hotel. There will be no exhibits, but those firms taking space in the Exhibition hall will have tables and chairs to provide a "conference atmosphere" for small groups to discuss the problem that face the man in the field in his relation with the manufacturer and the government's program.

(Concluded on Page 4, Column 1)

**R.S.E.S. Convention To
Start with Session
On Sunday, May 10**

CHICAGO—The refrigeration industry's place in the War program will be the dominant theme of the eighth annual convention of the Refrigeration Service Engineers Society, which will be staged Sunday May 10 to Tuesday, May 12, in the Stevens hotel here. A great part of the service engineer's convention will dovetail in with the All-Industry program.

An outstanding feature of the conclave will be a Priorities Clinic for refrigeration service engineers at 2:30 p.m. Tuesday, May 12, in the exhibition hall where priority men from manufacturers and wholesalers will be on hand with information regarding the proper ways to fill out priority forms and how to develop priority business.

R.S.E.S. members will devote Sunday morning and Monday afternoon, May 10 and 11, to business sessions of their own group, while Sunday (Concluded on Page 5, Column 1)

**Westinghouse Ups
Danley and Hildreth**

SPRINGFIELD, Mass.—Appointment of P. Y. Danley as assistant sales manager of the Westinghouse merchandising division and H. F. Hildreth as manager of commercial refrigeration and air conditioning (Concluded on Page 20, Column 1)

Complete Program of All-Industry Meeting

And Conference Clinic of Air Conditioning & Refrigeration Industry at Stevens Hotel, Chicago

**Monday, May 11th—9:30 a.m.
(Boulevard Room)**

Joint Session of
Refrigeration Equipment Manufacturers Association
National Refrigeration Supply Jobbers Association
Refrigeration Service Engineers Society

Singing of "Star Spangled Banner" and "God Save The King."

"What it Means to Be In TOTAL War" . . . Robert W. Horton,
Director of Information, War Production Board.

"The Conservation Code of the Air Conditioning
and Refrigeration Industry" . . . Dr. W. R. Hainsworth,
President, A.S.R.E.

"Critical Position of Our Material Supply" . . Harvey A. Anderson,
Bureau of Industry Conservation.

"Substitute Material and Practices in Our Industry"

a. Tubing . . . George Franck, Imperial Brass Co.

b. Valves and Fittings . . . George Allen, Mueller Brass Co.

"The Refrigeration Service Engineers Part in
the War Program" . . . (Speaker to be announced).

"What the Refrigeration Industry
Means to the War Program" . . . George F. Taubeneck,
Editor, Air Conditioning & Refrigeration News

Announcements of Afternoon Conference Clinics in
Exhibition Hall—1:30 p.m. to 9:30 p.m.

**Tuesday, May 12th—9:30 a.m.
(Boulevard Room)**

Singing of "Star Spangled Banner" and "God Save The King."

"The Functions of the Air Conditioning and
Commercial Refrigeration Branch of the
War Production Board" . . . J. M. Fernald, Chief,
Air Conditioning & Commercial Refrigeration Branch, WPB

"Military and Naval Requirements for
Refrigeration and Air Conditioning" . . . Capt. David L. Fiske,
Statistical Service, War Department

"The Refrigeration Wholesaler's Function
in the War Effort" . . . (Speaker to be announced)

"Air Conditioning and Commercial Refrigeration
Equipment in the Civilian Economy" . . . Henry A. Dinegar,
Div. of Civilian Supplies, War Production Board

"What This War Is Requiring of the
Refrigeration Industry" . . . A. B. Schellenberg,
Alco Valve Co.

Question Box Period: (During this period those in attendance are invited to direct questions to any of the speakers. Please be brief and to the point.)

Announcements: Priorities Clinics for
Manufacturers—Wholesalers—Service Engineers.

(Note: If you are interested in learning how to properly fill out priority forms, visit the Clinic Forum in Exhibition Hall on Monday at 2:30 where Priority men from manufacturers and wholesalers will be on hand to assist you.)

**Conference Clinics in Exhibition Hall
1:30 to 5:30 p.m.**

**Tuesday, May 12th—7:30 p.m.
All-Industry Banquet (Grand Ball Room)**

Note: Presidents of all Associations in our Industry at the speakers' table.

Singing of the National Anthem.

Orchestra and Singing
During service of banquet dinner.

Address: "DEMOCRACY" . . . Dr. Preston Bradley, Chicago.

Adjournment.

A-1-a For U.S. Forces, Big Plants; Stores, Restaurants Get an A-3; All Service Firms Must Register

**Amendment Sought
For Refrigeration
In Plumbing Order**

**Household Refrigerator
Repairs Not Included**

WASHINGTON, D. C.—Preference Rating Order P-126 covering material for emergency servicing of refrigerating and air conditioning machinery and equipment was approved by the War Production Board and became effective April 20.

The order provides graded ratings for repair parts for various types of commercial refrigeration and air conditioning installations.

Repairs for household electric refrigerators are not covered by the order, are not given any priority rating whatsoever.

Top rating of A-1-a is given for Army, Navy, and Maritime Commission installations, large food warehouses, and blast furnace air conditioning.

In issuing the order, made effective April 16, the Division of Industry Operations of the WPB declared:

"In order to prevent the dissipation
(Concluded on Page 20, Column 2)

**Delivery Permitted
On Household Units
If Money Was Paid**

WASHINGTON, D. C.—The refrigerator freeze order has been amended to clear up three points about which questions have arisen. No additional refrigerators are made available by this amendment.

The amendment (Amendment No. 3 to L-5-b), issued yesterday, provides that:

1. Any person other than a distributor or manufacturer who buys an electric refrigerator from any person other than a distributor or manufacturer, may re-sell that refrigerator. The main purpose of the provision is to enable a refrigerator dealer who wants to get out of business to dispose of his entire stock of electric refrigerators to another dealer.

2. Any person may ship or transfer from one location to another any new domestic mechanical refrigerator to

(Concluded on Page 2, Column 3)

**A-2 Rating Granted
For Dairy Repairs**

WASHINGTON, D. C.—Preference Rating Order P-118 issued April 18 by the WPB makes available priority ratings for deliveries of materials necessary for repair, maintenance, and operation of plants processing or producing dairy products.

An A-2 rating is made available for deliveries of materials required for emergency repairs to avert spoilage due to an actual or threatened breakdown of operations.

Materials needed for normal repair, maintenance, operation, or replacement can be obtained with the

(Concluded on Page 17, Column 4)

In issuing the order WPB officials have asked for cooperation and patriotic obedience to the letter of the order.

"Every Emergency Service Agency must consider themselves to be the appointed agent of the government, and it is their duty to keep existing

(Concluded on Page 16, Column 1)

Industry Conservation Code Will Be Presented at Chicago Meeting

Supply Jobbers Will Participate In Industry Meeting, Then Convene May 13

CHICAGO—After participating in the All-Industry program on May 11 and 12, the National Refrigeration Supply Jobbers Association will hold its annual business session all day Wednesday, May 13.

Election of directors for 1942 will be held during the afternoon meeting, while officers' and committee reports will also be heard.

The complete N.R.S.J.A. program follows:

Wednesday Morning, May 13
8:15 a.m.—Jobbers' Breakfast, North Assembly Room

9:30 a.m.—Report of President C. E. Borden, Boston, Mass.

Report of Secretary F. B. Hovey, Chicago, Ill.

Report of Treasurer H. H. Hubbell, St. Louis, Mo.

Reports of Advertising Committee

Henry V. Dick, Chairman

Analysis and Accounting Committee

Catalog Committee
Robert W. Sheperdson, Chairman

Finance Committee
F. S. Langsenkamp, Jr., Chairman

Manufacturers Relations Committee
Alex H. Holcombe, Jr., Chairman

Membership Solicitation Committee
H. S. McCloud, Chairman

Memento Committee
H. W. Blythe, Chairman

Standard Products Committee
Peter H. Askew, Chairman

Territorial Jobbing Survey Committee
C. W. Dennis, Chairman

Trade Relations Committee
Frank R. Pond, Chairman

12:30 p.m.—Jobbers' Luncheon, North Assembly Room

Wednesday Afternoon, May 13

2:30 p.m.—Report of Nominating Committee

Election of Directors for 1942
Report of Resolutions Committee, Peter H. Askew, Chairman

Proposed Amendments to By-laws

Unfinished Business
New Business
Adjournment

New Interpretations on 'Freeze' Order For Household Boxes

(Concluded from Page 1, Column 4)
which he held full legal title prior to the issuance of the freeze order. This is intended mainly to permit manufacturers to transfer their refrigerators between warehouses.

3. A person who ordered and paid for a refrigerator prior to the issuance of the freeze order is entitled to the refrigerator. Two examples are:

(1) A dealer ordered and paid for in full a shipment of refrigerators prior to the issuance of the freeze order. Such refrigerators are considered to be a part of the stock of such dealer and may be shipped to him by the manufacturer or distributor without violating the freeze order, provided the manufacturer or distributor had them in his stock at the time the freeze order was issued.

(2) A consumer ordered and paid for in full a refrigerator prior to the issuance of the freeze order but did not receive delivery of it. Such refrigerator may be delivered to the consumer, provided the refrigerator was in the dealer's stock before the issuance of the freeze order.

The WPB also issued today an interpretation to the refrigerator limitation order (L-5) to the effect that any refrigerator built by a manufacturer to meet specifications of the Navy, Army, or Maritime Commission for use on vessels built

or operated by them is not considered a domestic mechanical refrigerator and, therefore, does not come under the order.

Text of Order

TITLE 32—NATIONAL DEFENSE CHAPTER IX—WAR PRODUCTION BOARD
Subchapter B—DIVISION OF INDUSTRY OPERATIONS
PART 989—DOMESTIC MECHANICAL REFRIGERATORS
AMENDMENT NO. 3 TO SUPPLEMENTARY GENERAL LIMITATION ORDER L-5-b

Section 989.3 (Supplementary General Limitation Order L-5-b) is hereby amended in the following particulars:

Subparagraph (a)(6)(i)(a) is hereby amended to read as follows:

"(a) to any person any New Electric Domestic Mechanical Refrigerator from his Stock of New Refrigerators, and any New Electric Domestic Mechanical Refrigerator which he acquired on or after March 26, 1942 from the Stock of new Refrigerators of any other person not a manufacturer or distributor, and"

Paragraph (a) is hereby further amended by adding a new sub-paragraph (7) as follows:

"(7) Any person may ship or transfer from one location to another any New Domestic Mechanical Refrigerator in which he held the complete beneficial and legal title on or before 10 a.m. Eastern War Time, Feb. 14, 1942, whether or not he had actual possession thereof. Any New Domestic Mechanical Refrigerator which was in the hands of a seller at 10 a.m. Eastern War Time, Feb. 14, 1942, but which had been fully paid for before that date shall be deemed to be a part of the Stock of New Refrigerators of the purchaser, and may be shipped or delivered at his direction."

This Amendment shall take effect immediately.

Issued this 20th day of April, 1942.
J. S. Knowlson,
Director of Industry Operations

TITLE 32—NATIONAL DEFENSE CHAPTER IX—WAR PRODUCTION BOARD

Subchapter B—DIVISION OF INDUSTRY OPERATIONS
PART 989—DOMESTIC MECHANICAL REFRIGERATORS

INTERPRETATION NO. 1 OF GENERAL LIMITATION ORDER L-5

The following Interpretation is hereby issued by the Director of Industry Operations with respect to Section 989.1, General Limitation Order L-5, as amended March 3, 1942.

Any refrigerator built by a manufacturer to meet the specifications of the United States Navy or the United States Maritime Commission for use on vessels built or operated by either of those governmental agencies shall not be considered a Domestic Mechanical Refrigerator under the provisions of Limitation Order L-5.

Issued this 20th day of April, 1942.
J. S. Knowlson,
Director of Industry Operations

Figures In Industry Meeting



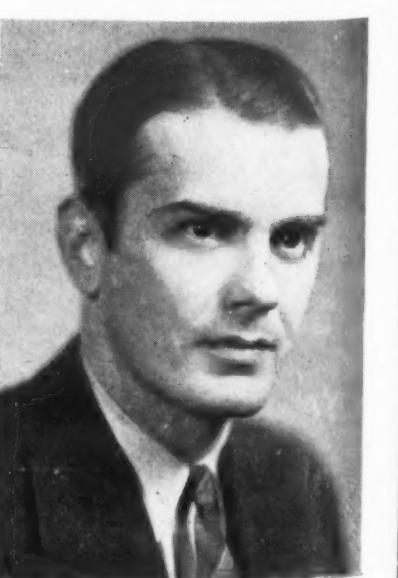
DR. W. R. HAINSWORTH
President of the American Society of Refrigerating Engineers, will speak at the meeting on "The Conservation Code."



W. C. ALLEN
Chairman of the program committee which arranged the program for All-Industry meeting.



A. B. SCHELLENBERG
"What This War is Requiring of the Refrigeration Industry" will be described by Mr. Schellenberg.



GEORGE ALLEN
Who, with George Franck, will handle a two-part discussion of "Substitute Material and Practices in our Industry."

ALCO VALVE COMPANY

Engineered Refrigerant Controls



For Highest
Evaporator
Efficiency

ST. LOUIS, MO.

2628 BIG BEND BLVD. U.S.A.

April 17, 1942

To Our Customers:

Attending the Refrigeration and Air Conditioning Conference in Chicago May 11th and 12th, will take your valuable time and effort. We believe it will be worth it, and hope we will see you there.

General meetings and conference discussions with men representing the various phases of our industry will do much to help us cope with our country's war production effort, and to meet the ever changing conditions brought about by the war. The broad picture of the industry's problems, which we are bound to get at this meeting, will make us better able to attack our own problems with realism and understanding.

Frankly, we will welcome the opportunity of discussing our mutual problems with you. There are many things which we have done in an effort to keep you supplied with Alco Valves. Most of this work you have never heard about, and we would like to tell you all about it.

The very nature of Alco products requires that stainless steels and other scarce materials be employed in their construction. This fact, plus Governmental restrictions, has made it difficult (and sometimes impossible) to supply our customers their normal requirements. We have made numerous substitutions, and we have re-designed our valves a number of times in an effort to use less critical materials. This, too, we would like to explain to you.

A sizable increase in our productive capacity has enabled us to take our share of the war production in building aircraft controls, and in continuing to supply the Army and the Navy with Alco Valves as we have done for the past ten years.

We are looking forward to meeting with you in Chicago, for we are anxious to discuss with you your problems as well as our own, and because we feel certain that we will both benefit by this meeting.

Sincerely yours,

ALCO VALVE COMPANY
A. B. Schellenberg
President

ABS:ER

WASHINGTON, D. C.—The War Production Board has ordered an end to the manufacture of oil burners and coal stokers for residential use after May 31, and limited the production of commercial and industrial types to orders bearing a preference rating of A-10 or better.

These actions were embodied in Orders L-74 (oil burners) and L-75 (coal stokers), both effective April 15.

The orders segregate burners and stokers according to capacity.

Order L-74 defines a "Class A oil burner" as any which has a capacity for burning oil at a rate in excess of 15 gallons per hour. "Class B burner" is any with a lesser capacity.

Order L-75 defines a "Class A coal stoker" as any which has a capacity for feeding coal at a rate in excess of 60 lbs. per hour. "Class B stoker" is any with a lesser capacity.

The terms of both orders establish these limitations:

1. Beginning today, no person shall produce, fabricate, or assemble any Class A oil burner or coal stoker except to fill an order with an A-10 or higher rating.

2. For the period April 1 to May 31, fabrication or assembly of Class B oil burners or stokers must not exceed $\frac{1}{2}$ of the production of these types during 1941.

3. After May 31, 1942, no person shall produce, fabricate, or assemble any Class B oil burner or coal stoker.

The manufacture of replacement parts for all types of burners and stokers is specifically permitted.

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GEORGE ALLEN
Who, with George Franck, will handle a two-part discussion of "Substitute Material and Practices in our Industry."

Railroad Refrigerator Preliminary Plans Are Announced For ASRE Meeting at Skytop, June 7-9 By Increased Volume

WASHINGTON, D. C.—To avoid a threatened shortage of railroad refrigerator cars, Joseph B. Eastman, Director of Defense Transportation on April 17 directed refrigerator car companies and railroads to distribute refrigerator cars for shipment of perishable products only.

This action was taken because of the increased volume of traffic moving in refrigerator cars and the increased distances such traffic is moving.

Explaining the move, in a letter to the carriers affected, Mr. Eastman said:

"Certain commodities such as canned goods and bottled goods have been loaded in refrigerator cars during winter months to prevent freezing damage. Such traffic can move without damage, however, in good, tight box cars during the moderate weather of the spring, summer, and fall months."

"Substantially greater tonnage can be loaded in box cars than in refrigerator cars, which are needed for the movement of perishable products."

N. Y. Air Conditioning Firms Attack Bill To License Them

BUFFALO—Charging that passage of the measure would turn loose upon the "woefully overburdened public" new hordes of job-holders and "taxeaters," Buffalo headquarters of the New York State Sheet Metal, Roofing and Air Conditioning Contractors' Association, Inc., appealed to the Legislature to "sandbag" the Crews bill requiring licensing of air conditioning contractors.

Clarence J. Meyer, state secretary of the organization laid before Erie County legislators copies of the resolution adopted by the association, which blasted the proposal as spoils legislation.

"The burden of taxation is already terrific and now is no time to add to the costs," the resolution stated.

The bill of Assemblyman Robert J. Crews, Brooklyn Republican, would license contractors engaged in construction and repair of air conditioning systems and would provide for inspection of all installed systems under supervision of a state board of five members to be named by the Governor, with local boards to be appointed by mayors. The association's resolution said in part:

". . . this bill provides for the creation of another horde of office-holders to prey upon the taxpayers at the rate of \$105 a day and expenses for the state board, and \$75 a day and expenses for the board provided for each city in the state.

It "further provides for the appointment of an unknown number of inspectors to serve until they are 60 years of age.

". . . a license fee of \$25 will be required of every one who installs an air conditioning system with an annual renewal fee of \$10."

Midwest To Discontinue Display Case Production

GALESBURG, Ill.—Midwest Mfg. Co. has made a trade announcement to the effect that when its present stock of refrigerated display cases is exhausted, the company will discontinue making display cases for the duration of the War because of the difficulty of getting strategic materials. No priority certificates will be required for the remaining cases, it was stated.

The company also declared that it will accept orders on its Model DP35 reach-in cabinet without priority certificates until further notice.

On other reach-in cabinet models, the company is not making any guarantee of delivery on any orders unless the order is accompanied by a priority certificate bearing a rating of A-10 or better. It is mandatory on the part of the company to give preference to orders with the highest priorities, officials point out.

Water Cooler, Forced Draft Unit Standards Ready

WASHINGTON, D. C.—New interim equipment standards for "Freon-12" water and brine coolers, and forced-circulation air coolers for commercial and industrial refrigeration, have been added to the published refrigeration standards made available by the Air Conditioning and Refrigerating Machinery Association.

The designation "interim" is used to indicate that these equipment standards are of a less detailed nature than those previously issued.

The printed copies of the new standards are available at a cost of 30 cents from the ACRMA headquarters, Southern Building, Washington, D. C. A combination of the two new standards plus the ASRE proposed standard methods of rating and testing (1) water and brine coolers; (2) forced-circulation air coolers for commercial and industrial refrigeration; (3) water-cooled refrigerant condensers; and (4) refrigerant compressors cost \$1.

Data Given on Air Raid Refrigerant Problems

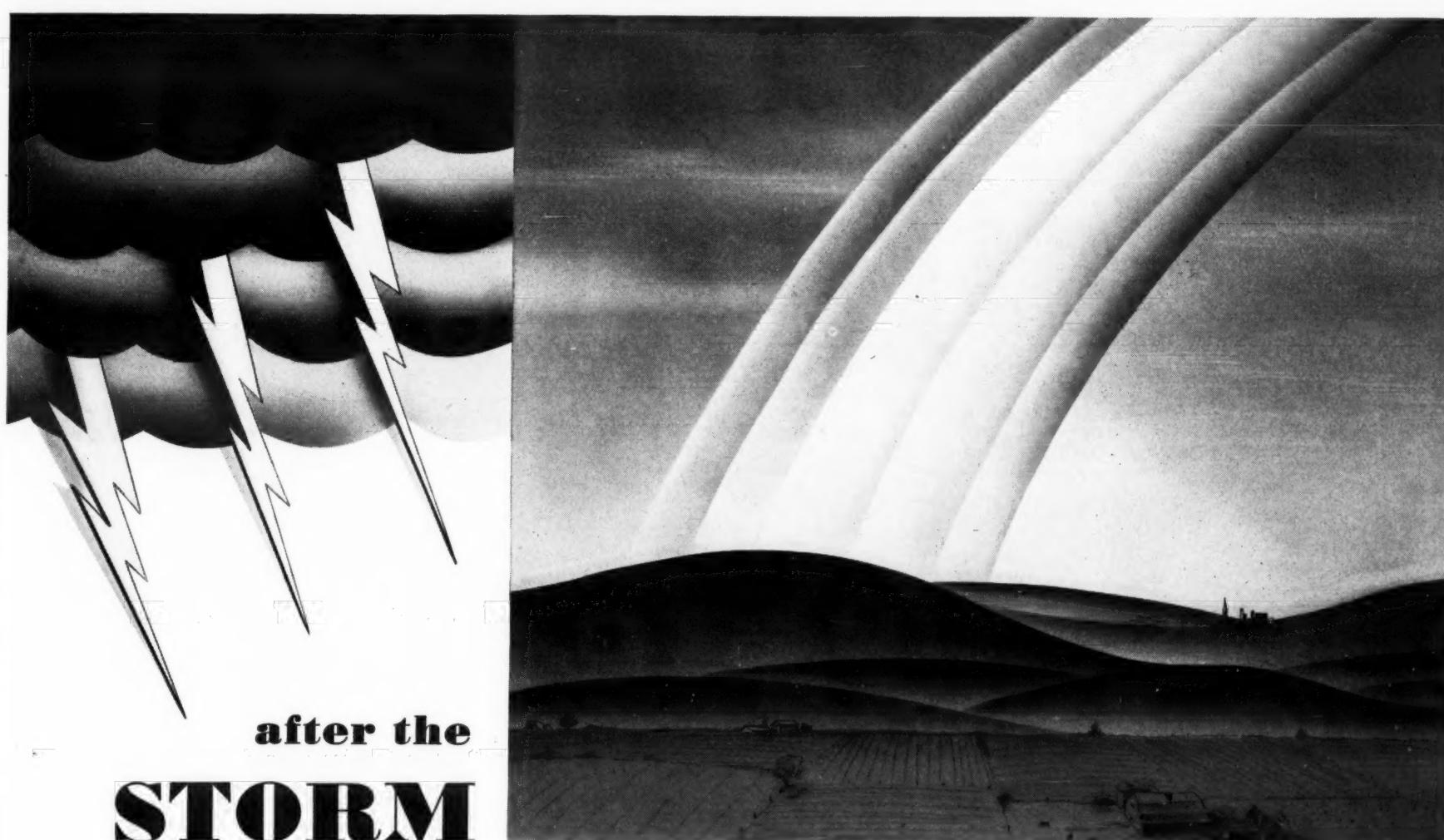
NEW YORK CITY— "Refrigerant Hazards and Civilian Defense," a 10-page mimeographed brochure compilation of data on refrigerants, has been recently completed by Irving J. Fajans, of the Aetna Supply Co. here.

The information discusses the hazards of escaping refrigerants, and suggests various first aid treatment.

Mr. Fajans, who believes that the Government should enlist the services of refrigeration supply jobbers and engineers to protect civilians should air raids destroy refrigeration installations, has outlined other programs of civilian protection during a raid.

Worthington Pump Net Near 3 Million Mark

HARRISON, N. J.—Worthington Pump & Machinery Corp. reports for 1941 a net income of \$2,909,622 compared to \$2,236,158 in 1940.



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AMERICA is finally awakening to the reality of war—total war—war on a scale so vast that it baffles the imagination. Its grim reality is being felt in millions of homes as the cream of our youth and manhood answers the call to the colors, and luxuries, comforts, and even necessities are denied to civilians.

Now, most of us are beginning to realize the seriousness of the emergency. Before it is over, our very right to survive may be tested to the breaking point by our fortitude and willingness to make sacrifices.

We at Henry Valve Co. are happy that our peace-time products are useful to many branches of the government in prosecuting the war to eventual victory. Much as we regret our inability to supply the demands of many of our customers—the only job that matters now is the *winning of the war*.

But even war has some compensations. Under pressure of necessity, science and inventiveness respond with supreme effort and with lasting benefit to mankind of the future. Out of this struggle will come new methods, new materials, new products—to make a better world.

There are today, in our laboratory, many new ideas being developed. When war-time restrictions are lifted, refrigeration and air conditioning will enjoy the benefits of more Henry "firsts".



HENRY

VALVE CO. • 1001-19 N. SPAULDING AVENUE • CHICAGO

PACKLESS AND PACKED VALVES • STRAINERS • DRYERS FOR REFRIGERATION AND AIR CONDITIONING • ALSO AMMONIA VALVES AND FORGED STEEL FITTINGS

All-Industry Meeting to Highlight Refrigeration's Role in War Effort

Program Plans For Chicago Meeting Include Large Group Sessions, Individual Meetings

(Concluded from Page 1, Column 1)

The Exhibition hall "conference clinics" will last from 1:30 to 9:30 p.m. on Monday, and from 1:30 to 5:30 p.m. on Tuesday.

At 2:30 on Tuesday afternoon, May 11, there will be "Priorities Clinics" in the Exhibition hall to give aid to all who are experiencing difficulty in filling out priority forms.

The tradition of the All-Industry banquet will be retained Monday night in the Grand Ballroom of the Stevens hotel. Dr. Preston Bradley of Chicago will be the principal speaker.

The All-Industry Conference adjourns officially Tuesday night, and the Exhibition hall will not be open on Wednesday.

There will be no displays in the booths in the Exhibition hall, other than an individual piece or cutaway unit to show a substitution or replacement of a critical material in a manufacturer's products. Trade literature and informational bulletins may be placed on the tables in the booths.

Annual meeting of the Refrigeration Equipment Manufacturers Association will be held at 2:30 p.m. Sunday afternoon, May 10. This will be the annual business meeting of the Association, at which election of officers will be held. No further sessions will be held beyond Sunday, permitting the members full participation in the All-Industry Conference and clinics.

As will be noted from a study of the program published on page 1, the program of formal talks includes a formidable array of men from the

government, and a selected list of men from the industry to discuss the many phases of industry's side of the story.

The men from the government who will speak include J. M. Fernald, Chief, Air Conditioning and Commercial Refrigeration Branch of the War Production Board; Henry A. Dinegar, Chief, Consumers' Durable Goods Section, Division of Civilian Supply; Robert W. Horton, Director of Information, War Production Board; Capt. David L. Fiske of the War Department Statistical Service and member of the Army and Navy Munitions Board; and Harvey A. Anderson, Bureau of Industry Conservation.

From the industry's side, Dr. W. R. Hainsworth, vice president, Servel, Inc., and president of the American Society of Refrigerating Engineers, will present the plans for the all-important "Conservation Code" of the industry.

"Substitute Material Practices" will be discussed by two men who are in a division of the industry most vitally affected by curtailment of metal use—George Franck of Imperial Brass Mfg. Co., and George Allen, Mueller Brass Co.

Speakers not yet named will discuss the part of the "Refrigeration Service Engineer" and the "Refrigeration Wholesaler" in the present situation.

What the War is requiring of the refrigeration industry will be outlined by A. B. Schellenberg, president, Alco Valve Co., and George Taubeneck, editor and publisher of

Meeting Chairman



C. H. BENSON

Chairman in charge of the All-Industry Conference and director of arrangements for the Clinic Booths.

AIR CONDITIONING & REFRIGERATION NEWS, will tell what the industry means to the War program.

Committee in charge of the All-Industry Conference and arrangements for the Clinic Booths includes C. H. Benson, Imperial Brass Mfg. Co. (Chairman); J. W. Hatch, Bush Mfg. Co.; W. D. Keefe, Fedders Mfg. Co.; R. H. Luscombe, Penn Electric Switch Co.; R. M. Van Vleet, Cutler-Hammer, Inc.

The program committee for the Conference included W. C. Allen, Modern Equipment Corp. (Chairman); K. B. Thorndike, Detroit Lubricator Co.; A. B. Schellenberg, Alco Valve Co.

Where You'll Find Manufacturers at Conference Clinic

Name of Company	Booth Assigned
Alco Valve Co.	70 St. Louis, Mo.
Ansul Chemical Co.	81 Marinette, Wis.
Armstrong Cork Co.	88 Lancaster, Pa.
Automatic Products Co.	118-119 Milwaukee, Wis.
Brunner Mfg. Co.	94 Utica, N. Y.
Bush Mfg. Co.	112 Hartford, Conn.
Business News Publishing Co.	58 Detroit, Mich.
Carrier Corp.	69 Syracuse, N. Y.
Convention Binder Service	106 Chicago, Ill.
Cutter-Hammer, Inc.	61 Milwaukee, Wis.
Davison Chemical Co.	113 Baltimore, Md.
Detroit Lubricator Co.	91-92 Detroit, Mich.
Dole Refrigerating Co.	71 Chicago, Ill.
E. I. du Pont de Nemours & Co.	83-84 Wilmington, Del.
Henry Valve Co.	107-108 Chicago, Ill.
Ideal Beer Cooler Co.	67 St. Louis, Mo.
Imperial Brass Mfg. Co.	115-116 Chicago, Ill.
Jarrow Products	66 Chicago, Ill.
Kerotest Mfg. Co.	89 Pittsburgh, Pa.
Mario Coil Co.	93 St. Louis, Mo.
Jas. P. Marsh Corp.	82 Chicago, Ill.
McIntire Connector Co.	72 Newark, N. J.
Mills Novelty Co.	105 Chicago, Ill.
Minneapolis-Honeywell Regulator Co.	114 Minneapolis, Minn.
Modern Equipment Corp.	85-86 Defiance, Ohio
Mueller Brass Co.	59 Port Huron, Mich.
National Refrigeration Supply Jobbers Association	110
Penn Electric Switch Co.	87 Goshen, Ind.
Ranco, Inc.	90 Columbus, Ohio
Refrigeration Service Engineers Society	A
Spehrer-Lange Co.	109 St. Louis, Mo.
Stangard-Dickerson Co.	62 Newark, N. J.
Superior Valve & Fittings Co.	68 Pittsburgh, Pa.
Tecumseh Products Co.	60 Tecumseh, Mich.
Temprite Products Corp.	104 Detroit, Mich.
Utilities Engineering Institute	63 Chicago, Ill.
Virginia Smelting Co.	57 West Norfolk, Va.
White-Rodgers Electric Co.	117 St. Louis, Mo.
Wolverine Tube Co.	103 Detroit, Mich.

Heads WPB Branch



J. M. FERNALD

Chief, Air Conditioning and Commercial Refrigeration Branch of the War Production Board, who will speak on the functions of that branch at the All-Industry Conference.

Civilian Supply Expert



HENRY. A. DINEGAR

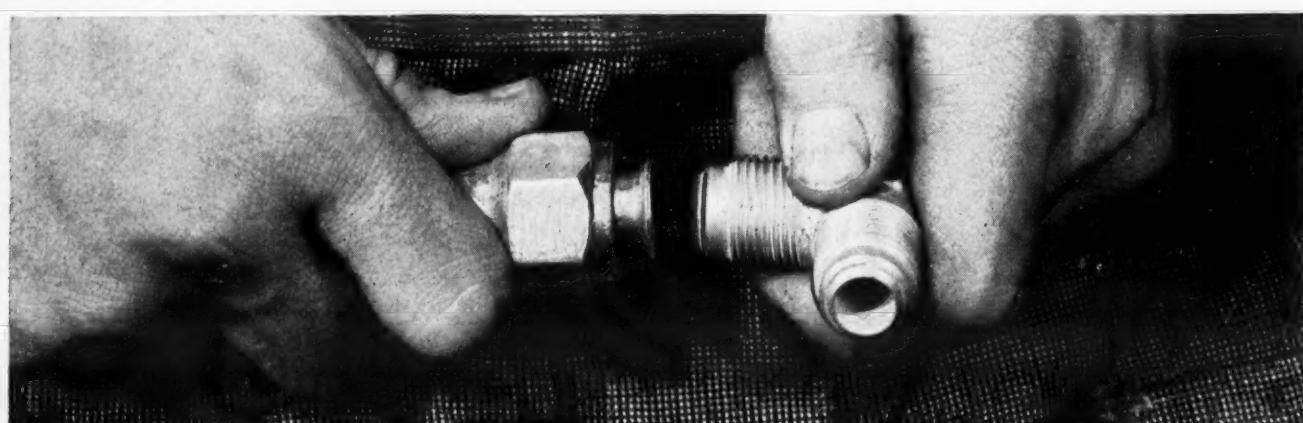
Chief, Consumers' Durable Goods Section, Division of Civilian Supplies, War Production Board, who will address the All-Industry meeting on "Air Conditioning and Commercial Refrigeration Equipment in the Civilian Economy."

Grant Heads Manufacture For Young Radiator

RACINE, Wis.—Appointment of Robert Grant, former executive in manufacturing, as vice president in charge of manufacturing of the Young Radiator Co. here was disclosed this week by Fred M. Young, president.

The company's expansion in war production as well as development in the manufacture of heat transfer units brought about Mr. Grant's new office.

After studying at Cornell university, he was a line superintendent with the Nash motors division of the Nash-Kelvinator Corp.

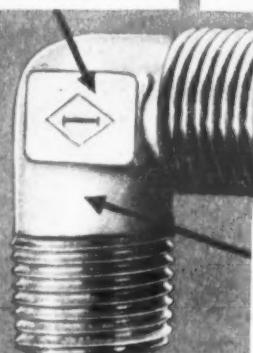


To the best of {YOUR} ability!

IMPERIAL FITTINGS WILL HELP YOU TURN OUT A BETTER JOB

Flats are placed on elbows and tees. This gives a wrench hold, eliminating the possibility of distorting the body in gripping the fitting, and also speeds up work materially.

The "Triple-Seal" groove is an exclusive feature of all Imperial Refrigeration Flared Fittings. When the flare is drawn up against the groove in the seat the copper is actually extruded into the groove. You get a tight, self-sealing joint without danger of twisting the tubing or shearing off the flare. Even when the seat is nicked you can still make a tight joint. You can reconnect as often as you wish.



Tees, elbows, crosses and nuts are made from brass forgings. This assures a fine grain structure, freedom from internal stress and a high tensile strength. It eliminates any possibility of seepage of refrigerant or cracking or splitting.

WITH millions of Imperial fittings going into extremely important war equipment it is becoming increasingly difficult to supply all of the fittings and other parts needed for maintenance and repair work.

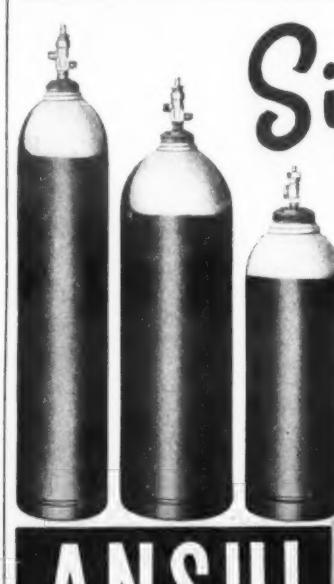
But refrigerating systems must be kept going and the job is going to call for the best of your, and our, ability and when we say our ability we also mean the Jobbers who have so ably served the industry.

Since conservation is so important today we suggest that whenever possible you re-use every brass fitting. Where the fitting is an Imperial Triple Seal you can get a tight connection even when the seat is nicked or marred.

Every attempt will be made by the Imperial organization to serve you, but if your Jobber is unable to deliver certain Imperial items you will know it is because right now the one job ahead of all others is "Win the War."

THE IMPERIAL BRASS MFG. CO.
565 S. Racine Ave., Chicago, Ill.

IMPERIAL
Air Conditioning and
Refrigeration Products



Sized for service
men's convenience

- Ansul cylinders of Sulphur Dioxide and Methyl Chloride come in several sizes, but there are three that are especially useful to the service man. These are big enough to contain sufficient quantities of gas, yet small enough to be carried easily in a service truck.

THE ANSUL JOBBER NEAR YOU CAN SUPPLY THESE HANDY-SIZED CYLINDERS AT YOUR CONVENIENCE

SO₂ . . . 25 lbs. . . . 70 lbs. . . . 100 lbs.
CHCl . . . 15 lbs. . . . 40 lbs. . . . 60 lbs.

ANSUL CHEMICAL COMPANY • MARINETTE, WISCONSIN
LET THE ANSUL JOBBER NEAR YOU SERVE YOU BETTER

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RSES Convention To Open with A Sunday Session on May 10

(Concluded from Page 1, Column 1) afternoon will be taken up with an R.S.E.S. education meeting.

Addresses, talks, papers, and question box periods will be presented Monday and Tuesday mornings, May 11 and 12, when R.S.E.S. participates in joint sessions with the Refrigeration Equipment Manufacturers Association and the National Refrigeration Supply Jobbers Association as a part of the All-Industry conference.

However, all will not be business at the three-day convention. Servicemen will join in with the All-Industry banquet and dance Tuesday night.

Schedule of the entire R.S.E.S. convention follows:

Sunday Morning, May 10
Business Meeting of Refrigeration Service Engineers Society
8:00 a.m. to 10:00 a.m.—Registration

10:00 a.m.—Convention called to order by James J. Kline, President, Illinois State Association, R.S.E.S.

10:15 a.m.—Introduction of National Officers
Address by President E. A. Plesskott, St. Louis, Mo.
Secretary's Report—H. T. McDermott, Chicago, Ill.
Treasurer's Report—S. A. Leitner, Kansas City, Mo.

Report of Committees
Advertising Committee—Willis Stafford, Chairman, Chicago, Ill.

Suggested Price Book Committee—Edward A. Vadakin, Chairman, Cleveland, Ohio
Educational Committee—A. M. Fenwick, Cleveland, Ohio
Other Committees

11:00 a.m.—Appointment of Convention Committees
Auditing Committee
Resolutions Committee
Nominating Committee
Announcements

Sunday Afternoon, May 10
Educational Meeting of Refrigeration Service Engineers Society
2:00 p.m.—Information Please

Please refrain from questions pertaining to priorities, material problems, etc. Submit priority questions in writing for Priorities Clinic on Tuesday afternoon

2:15 p.m.—"Brazing as an Aid to Servicing Refrigerators," by R. E. Chapin, Air Reduction Sales Co., New York City

2:45 p.m.—"Plastic Materials as Substitutes in Refrigeration Work," (speaker to be announced)

3:15 p.m.—"Meeting War Time Conditions in Refrigeration Servicing," by G. E. Graff, Columbus, Ohio

Monday Morning, May 11, 9:30 a.m.
ALL-INDUSTRY MEETING AND CONFERENCE CLINIC of the AIR CONDITIONING AND REFRIGERATION INDUSTRY

JOINT SESSION of
Refrigeration Equipment Manufacturers Association
National Refrigeration Supply Jobbers Association
Refrigeration Service Engineers Society

(Boulevard Room)

Monday Afternoon, May 11
Business Meeting of Refrigeration Service Engineers Society
2:00 p.m.—Information Please

2:30 p.m.—Reports of Convention Committees
Auditing Committee
Resolutions Committee
Nominating Committee

3:00 p.m.—Election of Officers
Unfinished Business
New Business
Adjournment

6:00 p.m.—Secretary's Dinner Meeting—North Assembly Room
All Secretaries of local chapters, or designated representatives, are requested to attend this meeting.

Tuesday Morning, May 12, 9:30 a.m.
ALL-INDUSTRY MEETING AND CONFERENCE CLINIC of the AIR CONDITIONING AND REFRIGERATION INDUSTRY

JOINT SESSION of
Refrigeration Equipment Manufacturers Association
National Refrigeration Supply Jobbers Association
Refrigeration Service Engineers Society

(Boulevard Room) PRIORITIES CLINIC for

Refrigeration Service Engineers

2:30 p.m.—Exhibition Hall

(Note)—If you are interested

in learning how to properly fill

out priority forms, attend the

Clinic Forum in Exhibition

Hall on Tuesday at 2:30 where

Priority men from manufac-

turers and wholesalers will be

on hand to assist you

CONFERENCE CLINICS IN EXHIBITION HALL

1:30 to 5:30 p.m.
* * *

TUESDAY EVENING—

ALL-INDUSTRY BANQUET

Address—"Democracy"—

Preston Bradley—Chicago

DANCING

Howard Hubbell Gets Commission In Navy

ST. LOUIS—Howard H. Hubbell, manager of the Brass & Copper Sales Co., refrigeration parts and supplies wholesaling firm here, has been commissioned a Lieut. Commander in the United States Navy.

He has been assigned to serve as an instructor of midshipmen in the Department of Marine Engineering in the United States Naval Academy at Annapolis.

Lieut. Commander Hubbell was graduated from the Naval Academy in 1920 and served for four years thereafter in the fleet. He resigned from the Navy in 1924.

Always prominent in industry cooperative activity after his company got into the refrigeration field, Lieut. Commander Hubbell was secretary-treasurer and a director of the National Refrigeration Supply Jobbers Association.

New Process Developed To Produce Chromium

SALT LAKE CITY—Development of a new process to produce domestic chromium is expected to prevent possible shortages in the nation's war industries now that foreign sources of the metal have been cut off by the War, Dr. R. S. Dean, chief engineer of the U. S. Bureau of Mines' metallurgical division, has announced.

Beach sands from Coos county, Ore., and chromite ore deposits near Columbus, Mont., have been successfully combined to produce the essential metal. The new chemical process supplements present methods of concentrating ore and sands, greatly improving the quality of chromium.

He pointed out that the process will provide the required ratio of three parts chromium to one part iron that is necessary for the manufacture of alloy steel. In the past domestic sands and chromite ore have not met this standard.

COME to CHICAGO

for

latest word concerning
the industry's use of

Substitute Materials

Gets Priority Order for Window Ventilators

PITTSBURGH—Standard Air & Lite Corp. has recently completed two priority orders for window ventilating equipment, C. S. Wabrick, treasurer, announced. The company installed eight large-sized units in the drafting and maintenance engineer's room of American Steel & Wire Corp., Donora, Pa., and added 12 units at Pittsburgh Limestone Corp.

STANGARD

Prime Surface

COLD PLATES

THE STANGARD-DICKERSON CORP., 46-76 Oliver Street, Newark, New Jersey

What Dealers Are Thinking and Doing About Merchandise Shortages

Specialist In Kitchen Modernization Sees Possibilities Without New Appliances

May Take Over Work Formerly Subcontracted

DAYTON, Ohio—"What kind of merchandise can I substitute profitably for electrical appliances?" Robert Hollister, president of Hollister's, General Electric dealership here, believes he has at least a partial answer to this question in the novel "Kitchen Planning Service" which the store has been offering to Dayton homeowners during the past two years.

Not only has this service enabled the company to increase its over all volume, Mr. Hollister reports, but it also has greatly augmented the sale of higher-priced individual appliances.

"We believe that the dealer, in looking for substitute lines, should stick as close as possible to merchandise related to what he normally would sell," Mr. Hollister explains. "This isn't possible if he puts in such lines as porch furniture, china, gift lines, etc. By promoting complete kitchen installations, we qualify to sell linoleum, wiring, cabinets, sinks, fixtures, lighting equipment, and other kitchen furnishings, without getting outside the range of our experience. Understanding the merchandising problems of such equipment, we can handle it with about the same profit ratio as appliances themselves."

Normally the Hollister store sells approximately 300 refrigerators a year, 150 trade-in units, and more than 200 ranges and 250 washing machines. Although realizing that all of these are sure to be limited from a supply standpoint, Mr. Hollister believes that his kitchen planning service will aid considerably in maintaining the more than \$100,000 per year volume.

The kitchen planning service is a department in the rear of the Hollister store which is available to any customer at any time. Presiding is Mrs. Becky Abramson, secretary of the store, and formerly an outstanding woman appliance salesperson.

(she has been a G-E "Topper" for several years). Free of charge, the work of her department is solely modernization of customer's kitchens—including taking the entire contract, designing a labor-saving arrangement, and overseeing the installation.

"Miss Becky," as Mrs. Abramson is known, is enthusiastic over the reception given her suggestions; despite the fact that until she attended a national "Kitchen College" two years ago at Geneva, Ill., she was entirely unfamiliar with this work. Mrs. Abramson receives all prospects from her salesmen, makes an appointment, then visits the home and studies the woman's needs. A sketch of the proposed design is submitted, and if satisfactory, she supervises the installation.

On all jobs, Hollister's subcontracts the entire installation, asking for bids on linoleum, wiring, plumbing, carpentry, and painting. The bids plus the price of the appliances makes up the complete cost of the kitchen, which is submitted as a flat price to the prospect. Inasmuch as both the homeowner and the store check every bid, there is not much sales resistance.

This service has been advertised monthly, with most prospects turned in by one of the appliance salesmen. Each asks his customer how her kitchen is arranged, and if he finds it the least bit old-fashioned, suggests that she consult Mrs. Abramson for possible modernization.

With the prospect, she can point out simple changes, such as removing old cabinets, rearranging plumbing fixtures to prevent fatigue, better location of lighting and appliances. In many cases Mrs. Abramson has been forced to overcome obsolete ideas and stubborn resistance from housewives who "like their kitchen the way it is." In every instance, however, the owner has been enthusiastic over the results; each job

selling two or three more among the owner's friends.

Hollister's maintains a private consultation room in which plans may be gone over, and the various subcontractor's bids submitted to the prospect.

Undoubtedly one major contributing factor to the success of this highly specialized form of appliance promotion is Mrs. Abramson's full-time work on it. Women are more confident in dealing with another woman, it has been found, and by reason of her training, "Miss Becky" can intelligently present such points as elimination of waste movements in the kitchen, relocation of plumbing, etc., in a way which appeals to housewives. Her principal "selling tool" is a book of before-and-after photographs which demonstrate graphically the striking beauty of a Hollister contracted kitchen.

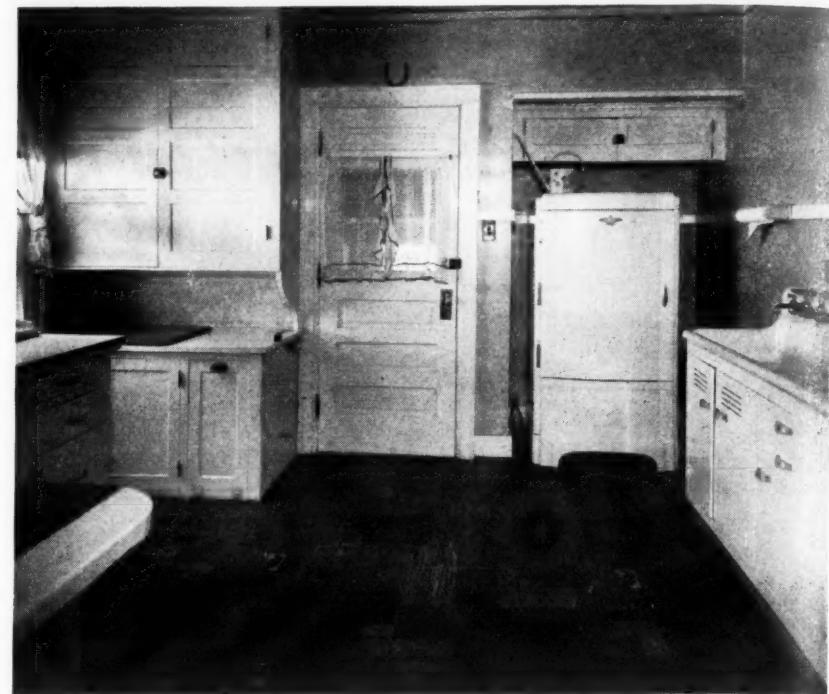
How will such a service overcome loss when appliance deliveries reach the "token" stage?

"Through the fact that we can readily add the essentials for kitchen remodeling to our own stock," it was pointed out, "we can easily accommodate an inventory of linoleum, wood and steel kitchen cabinets, lighting fixtures, electrical wiring, and even plumbing fixtures to bolster our appliance revenue if it appears necessary.

Added to this, every kitchen contains only the best appliances, with longer profits on each sale—this providing for a greater return from each sale. In this way, if we can no longer obtain enough appliances to sell our regular volume, we can switch promotion to the kitchen modernization service, and make the entire program a business, rather than a service."

Originally Mr. Hollister contemplated making no profit from the remodeling contracts except for that on appliances, and possibly a small margin on linoleum possible through a 15% dealer discount. Now he is studying possibilities of adding all related lines to the store's stocks, and promoting them as aggressively as appliances. In any case, he feels that the kitchen planning service will help the store to survive the difficult months ahead, and that it will continue to grow despite merchandise shortages.

Remodeling Is Mostly 'Service'



A typical kitchen before Hollister's planned its modernization. Note refrigerator in bay by door, sink away from windows, and long distance between sink, worktable, and range top. Note also the high cabinets over the refrigerator, difficult to reach and use.



The kitchen after remodeling reveals a new refrigerator and range closer together, the sink benefitted by being placed under the windows, and metal cabinets completely enclosing three sides of the room. Work tables and cabinet space is 300% greater.

Serviceman's Jewelry Helps Dealer Keep Volume

PETERSBURG, Va.—While numerous appliance dealers have turned servicemen to tide them over the duration, Francis Williams, proprietor of Williams Air Conditioning Co. here, has turned to the men in the armed services.

Mr. Williams cut his store space in half and filled his windows with timely military costume jewelry. As every soldier's girl-friend, wife, or mother is proud to wear a replica of his badge of rank or service, Mr. Williams, aided by a young saleswoman is selling his new line.

Governors for Cars Are Additional Item

OMAHA, Neb.—The Paramount Radio & Appliance Shop, which has been one of the biggest retailers of electric refrigerators in Nebraska for 10 years, has been appointed Omaha dealer for New Hoof governors.

George Roth, president of the Omaha shop, stated that an advertising campaign would be staged, pointing out the governor enables a motorist to set the maximum speed of his car to conform with President Roosevelt's recommendations.

Dealer Promotes Home Modernizing Plan

BRIDGEPORT, Conn.—Howland's, leading department store here which has been active in electric refrigeration and appliances, has adopted a new advertising slogan: "If You Can't Have That New Home, Fix Up The One You Have!"

In conjunction with this idea, "A Home Style Show Week," has been announced. Under this plan the store is congregating at its premises experts from other local businesses. There will be daily cooking demonstrations by the local gas company. This will help the sale of gas stoves and also glass cookware which will be used. The store will receive an advertising help on the glass cookware as well as on the stoves.

Kitchen modernizing exhibits and a Home Planning Center will be connected with a free consulting service to be presided over by a building expert from the Frank Miller Lumber Co. The First National Bank is to furnish a consultant who will give information on financing.

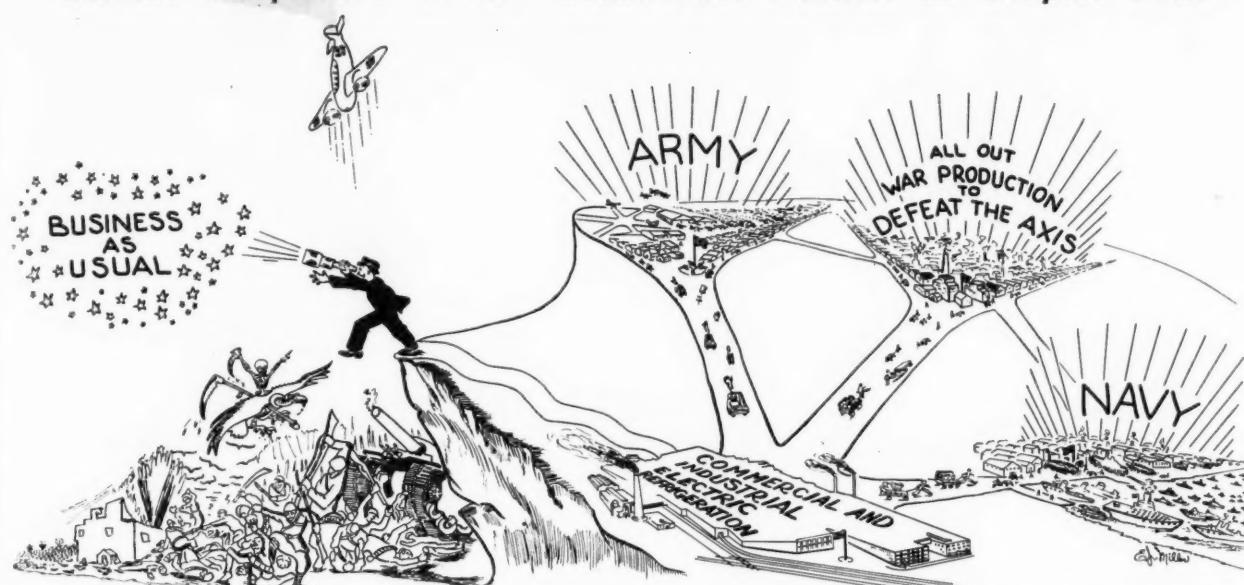
21 Philadelphia Dealers Add Paint Line

PHILADELPHIA—Twenty-one appliance dealerships here, including the Strawbridge & Clothier department store, have taken on a line of paint to supplement appliance volume, according to Harry Doull, manager of the Motor Parts Co., appliance distributor. Girl demonstrators and emphasis on home-improvement are coupled to help get paint sales into the heavy-volume bracket.

WE'LL BE SEEING YOU!

Yes, we'll be there and we'll be looking for you at the All-Industry Refrigeration and Air Conditioning Meeting. Remember the dates — May 11 - 12 - 13 — at the Stevens. Come on... Come to Chicago.

MINNEAPOLIS-HONEYWELL REGULATOR CO.
REFRIGERATION DIVISION
MINNEAPOLIS • MINNESOTA

Current Perspective on the Commercial Market In Graphic Form

This cartoon is part of the promotion piece which announced the "Cooperative Victory Sales Plan" of the Servel, Inc. Electric Refrigeration & Air Conditioning Division. Aim of the drive is to guide dealers into channels where their sales will be on a priority basis and will give maximum benefit to the War Effort.

E. A. Terhune, sales manager of the division, is directing the campaign on this new market.

Dole Co. Finishes Plates Navy Reveals Vast Food Freezing Program

CHICAGO—To cooperate with the government's program of conserving zinc and aluminum for War Production uses only, The Dole Refrigerating Co. here is now finishing its plate-type evaporators in infra-red bake enamel.

This finish, it was found, would well withstand the temperatures which range down to -45° F. , and its cost was reasonable.

After the plates are thoroughly cleaned following their fabrication, they are sprayed with a synthetic enamel instead of zinc or aluminum, and are suspended on a motor-driven conveyor which carries them through the 20-foot infra-red tunnel. When they emerge, about 12 minutes later, the enamel has been transformed into a hard, durable finish.

The baking is accomplished by 336 infra-red lamps mounted in two vertical banks, each containing 6 rows of 28 Alzak reflectors.

After they have left the tunnel, the plates are allowed to cool and are then routed to a station where they are filled with a "holdover" solution.

New Officers Named by Philadelphia A.S.R.E

PHILADELPHIA—A. B. Chamberlain of Creamery Package Mfg. Co., was named by the nominating committee to run for chairman of the Philadelphia section of the American Society of Refrigerating Engineers for the 1942-43 season at the May 8 election, it was disclosed at the group's regular meeting April 10.

Other nominees include: Harry Klingler, Kramer-Trenton Co., first vice chairman; Dr. E. S. Ross, Sun Oil Co., second vice chairman; and Thomas S. Noble Elliott-Lewis Co., secretary-treasurer.

The new officers will be inducted into office at a special dinner meeting on May 15, R. J. Thompson, chairman, said.

Featured speaker of the April 10 session was Walter L. Upson, of Torrington Mfg. Co., who discussed "Fans," using various shaped fan blades with charts to show variations in efficiency in air movement, power factor, and quietness in several types of blades and methods of application. Frederick E. Junker, of General Electric Co., presented the paper "Fundamentals of Motors" prepared by Lieut. Commander R. A. Fuller, who is on active duty in Washington, D. C.

Omaha Distributor For Kooleraire Named

OMAHA, Neb.—The Omaha Appliance Co. has been appointed distributor for Kooleraire evaporative cooling equipment manufactured by the United States Air Conditioning Corp. Byron K. Eaton, who is sales manager for the firm's Delco heating division, also will be in charge of sales of the air conditioning equipment, according to Paul W. Jacobus, head of the firm.

Mr. Jacobus pointed out that the new equipment is free from most war priority restrictions.

Eckhardt Leaves Danforth To Take Army Commission

PITTSBURGH—Robert E. Eckhardt, vice president and general sales manager of Danforth Co. and very well known here in commercial and domestic refrigeration circles, has left his 12-year-old business association to accept a commission as captain in the U. S. Army Air Corps.

Mr. Eckhardt reported for duty April 16 at Miami Beach, Fla.

Meats, including beef, bacon, sausage, and frankfurters, frozen solid as ice, are among the items always ready for quick shipment. Two hundred thousand dozen eggs which have been processed by being dipped in mineral oil are now in the storage refrigerator.

Everything from bologna to the old standby, beans, and vinegar to yeast is included in one of America's largest wartime export ventures.

N. Y. Agriculture Dept. Asks 'Cold' Warehouses For 'War' Efficiency

BUFFALO—The State Department of Agriculture & Markets, through its bureau of food control, has called on the state's 300 licensed refrigerated warehouses to maintain their establishments on the highest level of sanitation and efficiency and keep stored foods in the best condition.

First steps toward bringing this network of food repositories to the highest degree of effective service in preparation for extraordinary demands were taken at a conference here between Director Clifford R. Plumb of the bureau of food control and officers of the New York State Association of Registered Warehouses. The association has its headquarters in Buffalo, with George D. Liles as president. Mr. Plumb said he urged the warehouses that:

1—They realize that their plants form an integral and vital part of the defense picture, "the most important link in the chain of sustaining a uniform supply of foodstuffs."

2—They take special pains to keep their plants in the finest sanitary condition, permitting no let-down of standards on account of anticipated large holdings, labor shortages, or other factors; that all meats, poultry, dairy products, fruits, vegetables, or other foods consigned to their custody for preservation be accorded the best care.

3—All refrigerated warehouses maintain close liaison with the state department of agriculture and markets, making certain their monthly reports of holdings are scrupulously accurate, thereby providing both the department and state defense authorities with a continuous authentic picture of available food products in the state's storage plants.

Mr. Plumb declared the state association pledged complete cooperation and preparation to render peak service in the event of enemy destruction of appreciable quantities of foodstuffs and sudden food shortages.

"I confidently believe these warehouses will be in a position to give effective aid if called upon in any emergency," said Mr. Plumb. "With detailed inventories constantly before us, prompt interchange of such supplies between communities or within zones would be greatly facilitated."

Westinghouse 'Coolant' Cooler Becomes Part of Machine Tool Filter Unit

EAST SPRINGFIELD, Mass.—When experiments in their own machine shops demonstrated the value both to the product and the worker in the mechanical refrigeration of cooling oils or "coolants" as used in machine tools, particularly lapping tools and centerless grinders, the Westinghouse Electric & Mfg. Co. became interested in the development of this application on a commercial basis.

The machine tool used in the test was the Norton "Hypolap" and the filter used was made by the U. S. Hoffman Machinery Corp.

By keeping the temperature of the "coolant" at a uniform temperature, the work done on the machine does not show the wide variation in finished dimensions as it does when the temperature of the coolant varies from room temperature at the start to possibly 140° F. after continuous

operation. Without cooling a high percentage of rejects was shown towards the end of the working day.

Furthermore, refrigeration of the coolant did away with the "rash" which often appeared on the hands and arms of the workmen as a result of the splashing of the hot coolant on their person during the hours that they tend the machine.

Refrigeration unit was the Westinghouse standard B-33-CU hermetically sealed $\frac{1}{3}$ -hp. mill cooler unit. The refrigeration coil was immersed in the coolant reservoir of the filter, and handled the heat load from the pump as well as that in the oil.

U. S. Hoffmann Machinery Corp. combined this refrigeration system with its oil filter unit in one complete packaged job, to handle single machines or a battery of small machines.

Mathieson Alkali Puts Office In Atlanta

NEW YORK CITY—Effective April 13, carbon dioxide sales headquarters of The Mathieson Alkali Works was moved from Washington, D. C. to Atlanta, Ga., reports Charles T. Longaker, manager of sales of the Mathieson carbon dioxide division.

The new sales office is located in Suite 1006 of the Norris Building.

Auburn Central Mfg. Co. Now 'American Central'

CONNERSVILLE, Ind.—Name of Auburn Central Mfg. Corp. here is being changed to American Central Mfg. Corp., reports Saunders P. Jones, president.

No changes are contemplated in personnel or in the general character of the business, Mr. Jones states in announcing the change.

Germ Warfare on the Home Front

Deadly bacilli of the black plague, dropped from Japanese planes on the villages of China, are not the only bacterial threat to the United Nations' cause.

Microbes which multiply by millions in fresh foods of every kind, may cause serious loss through spoilage... and menace the stamina of our fighting forces, the health and well-being of our civilian population.

Refrigeration is our most effective weapon against this threat to our food supply... controlled cold which prevents growth of the bacteria of decay, keeps foods pure and wholesome in their original freshness and flavors. On trucks, trains, ships... in warehouses, restaurants, institutions... refrigeration is constantly on guard. The food merchant in your neighborhood depends on it to preserve his stocks and protect your health.



Because commercial refrigeration is so vital to our victory, so important to national well-being, Penn is continuing to provide the automatic controls required to maintain the service of this industry. At the same time, we are devoting our research and production facilities without stint to direct work for our armed forces. *Penn Electric Switch Co., Gosben, Indiana.*

PENN
REFRIGERATION, AIR CONDITIONING, ENGINE,
HEATING, PUMPING AND AIR COMPRESSOR
CONTROLS

How New Orleans Dealer Shifted To Refrigeration Service Business

Quarters Remodeled, Service Charges Are Stepped Up, Employees Duties Changed

NEW ORLEANS—A business once 100% appliance sales and now 100% refrigeration service aptly describes Wand's, Inc., veteran commercial and domestic refrigeration dealership here which has completely remodeled its building, largest appliance showroom in the city, to a refrigeration service shop employing 18 service mechanics.

M. T. Wetherbee, general manager for the company, is convinced that the expanding service market opened up by refrigeration manufacturing curtailment offers a better "loophole" for the dealer than such sidelines as furniture and rugs. "We are known as Wand's, Inc., Refrigeration," Mr. Wetherbee pointed out, "which will go a long way toward qualifying us for getting business in the future."

Formerly the company operated with six appliance and commercial salesmen receiving a salary of \$65 a month plus a 10% commission on all sales over a \$2,000 quota. This number has been cut to four, several of the original crew being drafted or enlisted, who will sell commercial equipment and appliances as long as they are available, then trade-in reconditioned appliances until the stock of 200 or more used refrigerators runs out. After that they will be busy selling service and handling larger-scale work such as ice-cream plants, frosted food distributors, etc.

The changeover to service came in July, 1941, when Mr. Wetherbee felt it was time to do something about merchandise shortages, and converted the entire rear half of the building to the largest refrigeration service shop in New Orleans. Offices were moved up front, the showroom cut in size, and all merchandise in storage moved to a leased warehouse space two blocks away. This left a space about 70 x 40 into which were built a service order office, parts

room with \$11,000 inventory (painstakingly acquired by early buying and supply cooperation), a 20 x 20 reconditioning shop with modern equipment, woodworking shop, and two paint shops for handling domestic and commercial boxes.

Realizing that it would be difficult to keep men on the payroll, Mr. Wetherbee installed fluorescent lighting, showers, water coolers, and other comforts for the shop which go a long way toward keeping men happy. At the same time, the former shop crew of five was increased to 18 men, by hiring independent service men, and advertising through the state for them. Mr. Wetherbee also insured the profitable operation of the shop by employing B. W. Jones, formerly service manager for a New Orleans Kelvinator distributor, to manage his new business.

Feeling that rush business in the future will demand ability to run out each job in jig time, Mr. Wetherbee added the innovation of a truck door large enough to back a truck loaded with equipment into shops themselves, where repairs can be made right on the truck bed if necessary. Last year, although the conversion to service was not advertised at all, Wand's had close to 125 calls a day; therefore needs anything which contributes to speed.

Mr. Wetherbee has set a service rate of \$3 for the first hour, \$2.50 an hour afterwards. This is higher than average; however will be indispensable from the standpoint of keeping men on the service staff.

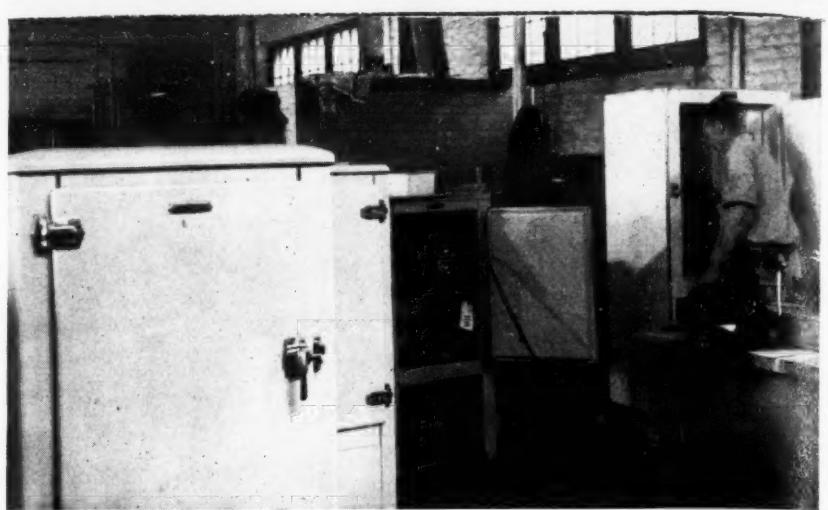
"We lost 12 men in six months even though we are paying high salaries," he pointed out, "consequently, we must produce enough income on service calls to pay the men as well as they would on government work; otherwise we will be left with a big shop and nobody to operate it."

Only exceptions are big-volume service arrangements such as chain grocery stores, city-owned public markets, and a contract to service 4,800 refrigerators in a New Orleans housing project. Wand's is training additional men, and expects to have a crew of 20 mechanics available when the summer peak arrives.

Mr. Wetherbee expects service calls to amount to more than 100 a day through the hot weather, and will give preference to commercial calls simply because it will be difficult to devote servicemen's time to widespread calls in homes over the city.

Four men in the shop are permanently employed overhauling refrigeration mechanisms. Another handles the parts room, while three girls will receive service orders. One engineer has the job of laying out and bidding for government installations.

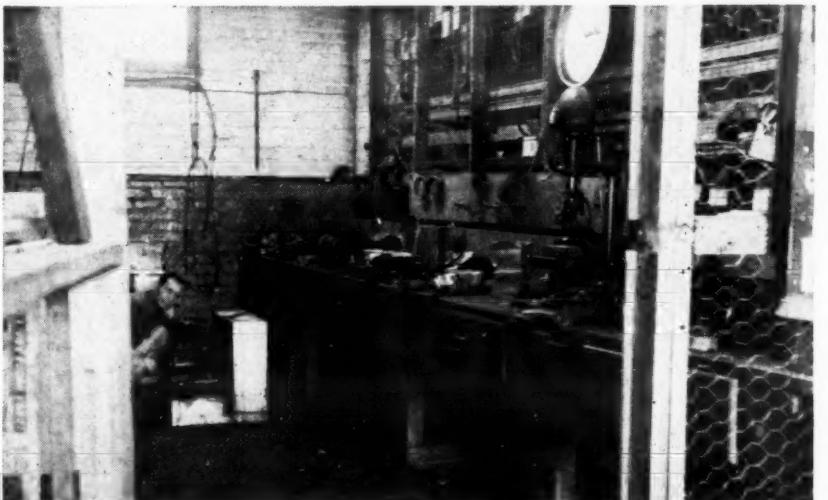
When calls are slack, the entire crew if necessary will work on reconditioning of used refrigerators and commercial equipment which Wand's is buying from dealers without their own shop facilities, and from old store buildings near or in New Orleans.



In spare moments when not busy on calls or regular shop work the employees of Wand's spend their time in rebuilding old units.



Neatly arranged and labeled parts bins of ample size constituted one of the alterations in the Wand's establishment.



Fluorescent lighting, plenty of workroom, and power-driven tools mark the shop's workbench. Special steps have been taken to make everything as nice as possible for employees.

COME to CHICAGO for discussions with leading manufacturers about their NEW PRODUCTS

Tilco Fin Tubing Data Given In Curves, Tables

BROOKLYN—Engineering data on Tilco Fin extended surface tubing in the form of curves and tables based on test information obtained in the laboratory of an Eastern university are contained in a bulletin issued by Tilco Fin, Inc. here.

One chart provides "U" factor curves of overall coefficient heat transfer as plotted against pounds of air per square foot net area. The curves and tables show heat transfer from steam to dry air. When used with other fluids and gases, substitution of known heat transfer coefficients can be made to set up equations from which the overall transfer can be accurately determined.

Tables show the overall coefficient of heat transfer at specified face velocities of the air into the coil.

Other data is given on pressure drop, in chart form, and on physical data for the various types and sizes of coils, in chart form.

95%

That which inspires wins wars. It is determination to preserve the democratic way of life that spurs us onward to eventual VICTORY. It is the solemn pledge to our fighting forces, never to let them down, that has performed miracles all along the Nation's assembly lines. Here at Universal Cooler we are further inspired by the fact that 95 per cent of our productive capacity is now devoted to the war effort. This means that high standards of precision manufacture are being rewarded with a very definite job to do in bringing VICTORY that much closer.

UNIVERSAL COOLER CORP., Marion, Ohio, U.S.A.

Automatic Refrigeration Exclusively Since 1922

Universal Cooler of Canada, Ltd., Brantford, Ont.



**YOURS
IS AN IMPORTANT
RESPONSIBILITY
"FOR THE DURATION"**

NEVER BEFORE has it been so important for refrigeration and air conditioning dealers and service shops to "hang-on" as it is today. WITH YOU lies the responsibility of maintaining the refrigeration and air conditioning equipment of this entire country for the duration. It is you who will be depended upon to keep equipment, varying from a few months old to 12 and 15 years old . . . in dependable operating condition.

You can't let these responsibilities slide any more than our brave troops would turn tail to the enemy.

Essential to your best efforts will be genuinely dependable, serviceable parts—and you know from experience that Kerotest Valves and Fittings are easy to install, long wearing and completely dependable. Because you and the equipment you service so well are dependent on reliable parts, we at Kerotest are doing everything within our power to make genuine Kerotest Valves and Fittings available for every essential refrigeration and air conditioning requirement.

KEROTEST

**KEROTEST MANUFACTURING CO.
PITTSBURGH, PA.**

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What's the 'Special' Equipment Needed in Rebuilding Operations

A List of the Essential Items, and Some Explanation of Their Use In a Shop

TORONTO, Ont., Canada — The essential "special" equipment that is useful in a refrigeration serviceman's shop for the purpose of re-operating used refrigerating units was described by William J. Marshall of the Marshall Refrigeration Co., Toronto, during the recent Canadian Refrigeration Conference here.

Mr. Marshall first described the essential equipment needed in outline form as follows:

Welding and/or brazing equipment — handy to have for the repair of coils, and to braze cracked pulleys, receivers, etc. If you can obtain one and learn how to use it correctly, a cutting attachment is very valuable.

Cleaning apparatus — degreasing equipment, nitric acid bath for brass parts, muriatic acid bath for compressor parts, and a hot water bath. Water pump—best to clean out a condenser.

Gasket cleaning equipment.

Lathe—for refacing shaft seals, and valve plates, and to refinish certain motor parts.

Gas metering device.

Expansion valve and control tester—easy to develop your own. Mr. Marshall has a somewhat elaborate one of his own design and construction, with a brine tank and a heater, and the necessary pressure and temperature and electrical indicating gauges and meters.

A drying system—either a dehydrating oven or a dehydrating pump.

Paint job equipment—spray type much preferable. Especially helpful with a household refrigerator, where the service job may be sold to the housewife on the basis of how good it looks.

One rigid rule that should always be followed in the re-operation shop is to put the unit on a test bench after it has been re-built for at least a four-hour test of the compressor operation.

Brazing and Welding Units

Soldering, brazing, and welding operations are probably all used in the original manufacture of refrigerating units, and all three methods can be used in a repair shop. Soldering and brazing are much the same type of operation because the parts being joined are not melted when heated to the temperature at which the alloy being used would flow. In welding the edges of the parts being joined are melted and fused with the filler being added, which is generally about the same material as the parts being joined.

The majority of such operations are now brazing. It is a good rule to disassemble and reassemble units and parts by the same method that the manufacturer used to put them together. This means the use of an oxyacetylene torch for brazed joints.

There are three types of brazing alloys used by manufacturers—Easy-Flo, Sil-Fos, and Phos-Copper. Easy-Flo can be used on ferrous and non-ferrous metals such as steel, stainless steel, copper, brass, and nickel. Sil-Fos and Phos-Copper, which have a phosphorous content, can be used only on non-ferrous metals such as copper, brass, bronze, and should not be used on iron or steel.

In brazing work there are a few simple fundamentals for the repairman to observe. It is necessary to have clean surfaces for brazing. Some degreasing method should be used and then the surfaces rubbed clean with emery cloth or something similar. The flux used must have a melting point lower than that of the brazing alloy used.

Experience will teach the use of

the proper tip size for the various metals. Copper requires a larger tip than steel of equal thickness because copper carries the heat away faster. Three or four tip sizes are generally recommended. The hose should be long enough to reach from the gas cylinders to the bench. Pressure reducing regulators are necessary to reduce the pressure in the oxygen and acetylene cylinders to the 2, 3, or 4 pounds used at the torch, depending on the tip size.

The operator should have goggles. A sparklighter and five-way wrench to make necessary connections are other equipment. The cylinders of oxygen and acetylene are leased for a definite period of time from the gas and equipment supply house.

Cleaning Tank Setup

A fair amount of equipment is needed for a complete parts degreasing and cleaning setup. A recommended arrangement is to have the necessary tanks grouped together under a ventilating fan or hood.

First tank in terms of use is the degreasing tank, made of steel or galvanized iron of a size large enough for the largest parts. Various kinds of degreasing solutions can be used, many of which need to be heated up (although some "cold" degreasing solutions are now available).

Parts should be washed with cold water after removal from the solution.

The second tank can be made of galvanized iron and is used to protect the nitric acid container in which brass parts and fittings are cleaned. The solution consists of 20% nitric acid in water.

A third tank can contain a solution of 20% muriatic acid and 80% water for cleaning all steel and iron parts, such as receivers and compressor bodies, but never used for brass or copper parts.

The fourth tank is for hot water which should be about 200° F. when used for washing purposes.

In using the tanks rubber gloves, aprons, and goggles should be part of the makeup of the operator. Close fitting covers should be provided over the tanks when they are not in use.

In parts cleaning work all parts must be degreased first, then rinsed in cold water and then hot water. Then dip the part into the bath, according to the type of metal. The dipping must be done quickly in the nitric acid, but in the muriatic acid bath the part can be held for a longer time.

Following the dip into the acid bath the parts are washed in cold water to remove the acid, and it is a good idea to use a 2% soda ash solution as a neutralizer. After this neutralizing process the parts are again put in hot water, and upon their removal are "blown" dry with compressed air. Steel and iron parts should then be covered with some kind of a rust inhibitor.

To clean condenser or other types of coils it is necessary to force the solution through the coil. This can be done by using two metal containers with connections to a pump or vacuumator, so that the solution will be drawn from one container through the coil and then into the other container, and then back again by reversing hand valves in the lines to the pump.

Work for a Lathe

There are many uses for a lathe in a re-building shop, especially in situations such as the present in which it is difficult to get the specific replacement part needed.

Applications for which the lathe can be used include the truing of commutators, truing and grinding of seals, valve plates grinding, truing of crankshafts, boring connecting rods, reboring and honing cylinders, and making bushings and bearings.

When the serviceman sets out to recondition a unit he will often find it necessary to true the commutator of a motor armature, because after it has been in use for some time the commutator becomes worn and the insulation protrudes out and prevents good contact between brushes and the commutator, and results in

arcng. Only remedy for a commutator surface that is no longer smooth and round is to machine the surface true in a lathe.

A keen edged cutting bit should be used to get the smoothest possible finish on the surface of the commutator.

A refrigerating compressor's main bearings can be refinished by mounting the crankshaft between the lathe centers. Where the crankshaft metal is hardened, it will be necessary to use a grinding wheel in the tool posts, but where it is not hardened, the bearing surfaces may be re-finished with the lathe tool, and then polished with a fine emery cloth. The throw bearing may be refinished either by turning and polishing, or by grinding.

In refinishing a crankshaft very light cutting should be done, just enough being removed to provide a smooth finish.

In grinding the face of a compressor seal the lathe must be correctly leveled and "squared," and the proper grade of grinding wheel used, so that a very smooth surface will be obtained. If the seal is in poor shape a coarser wheel should be used for rough grinding first, and then the finer wheel used for the finish.

Refinishing Small Parts

A seal seat can be mounted between the lathe centers and should be finished with the same sort of a grinding wheel as is used on the seal face, and if proper care is taken in these operations a gas tight seal may be obtained with little or no hand lapping.

Float valve needles, stems from hand valves, and other devices can be refinished by methods similar to

those used on seal faces and seats.

For boring re-babbited connecting rod boring attachment can be mounted on the lathe carriage. This is a universal attachment having adjustable stops, and allows various sizes and types of connecting rods to be mounted for the boring operation.

Valve & Control Test Bench

Test benches for thermostats and thermostatic expansion valves can be built on any elaborate scale desired by the individual serviceman, but the essential elements are relatively simple.

About all that is needed is a dial thermometer, panel mounting or outlet for the thermostat, and a well or some kind of receptacle holding a non-freezing liquid, refrigerated by a tube-within-a-shell arrangement or by some kind of a coil arrangement.

In operation a machine is connected to this test set-up and is operated automatically from the thermostat, with the feeler bulb of the thermostat and the feeler bulb of the thermometer in the non-freezing compound. Cut-in and cut-out temperatures noted from the dial thermometer will indicate if the thermostat is operating in the proper ranges. Such a test bench can be used to check superheat setting and the "tightness" of a thermostatic expansion valve, as well as the "charge" in the power element of such valves.

Drying ovens or bake ovens can be purchased for refrigeration work, or the serviceman can construct his own if he can find the time—and materials.

COME to CHICAGO

for
information on properly
filling out and using

PRIORITY FORMS

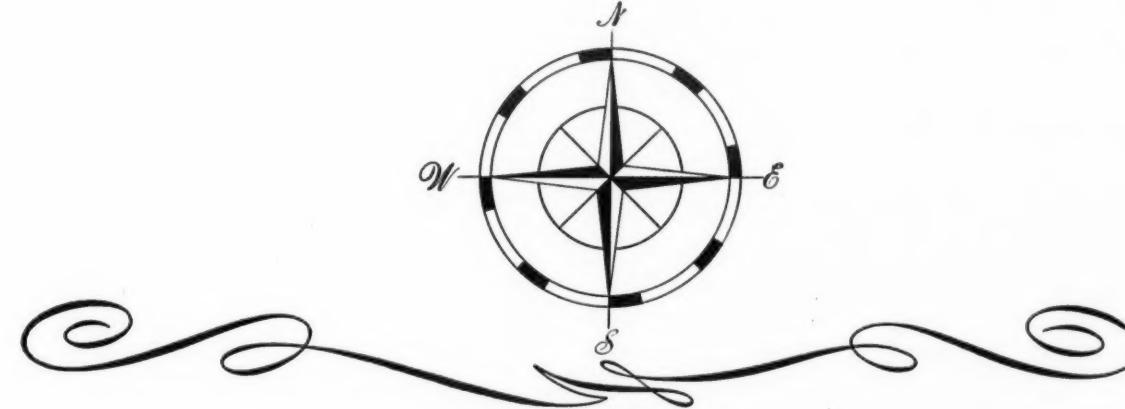
Such an oven can be made of metal sheets or partitions covered with a fire-resistant insulating material. It should be made large enough to hold the biggest unit that the serviceman may figure on handling. A hot plate or gas burner unit can be used for the heating element.

The oven should be capable of maintaining a temperature of about 200° F. for a period of about 10 hours while drawing a vacuum of 28 or 29 inches on all parts of the unit. The vacuum can be drawn with the American Injector "vacuumator" or some similar device.

Fischer Leaves Hotpoint to Join Standard Transformer

CHICAGO—G. W. (Bud) Fischer has resigned from the home office staff of Edison G. E. Appliance Co., Inc., (Hotpoint) to join the organization of Standard Transformer Co., Warren, Ohio, in charge of New York district sales.

Mr. Fischer had been associated with Hotpoint and General Electric for the past 15 years.



LET'S SET A STRAIGHT COURSE

Let's get together at the All-Industry Meeting in Chicago on May 11, 12 and 13.

You have problems... plenty of them. We may not have all the RIGHT answers, but at least they will be the most UP-TO-DATE ones obtainable. Perhaps we can help.

All-out effort by Bush personnel (we're proud of them) enables us to supply essential civilian needs...as well as the literally hundreds of demands by Army, Navy, Air Corps and Merchant Marine.

As long as it is humanly possible we shall continue to serve you.

In the meantime, our information, our experience, our available facilities, our civilian production are all at your disposal.

So let's get together. Let's take a long look... and perhaps a shrewd guess... at what lies ahead. Let's set a straight course.

We'll be looking for you... ALL of you... at the Bush booth in Chicago.



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Air Conditioning & REFRIGERATION NEWS

Trade Mark registered U. S. Patent Office; Established 1926 and registered as Electric Refrigeration News

F. M. COCKRELL, Founder

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Refrigeration Will Help Win the War

Interested In Your Future? Come to The All-Industry Meeting

After long months of uncertainty, confusion, and bewilderment, the future of the air conditioning and refrigeration industry can now be seen in considerable clarity and detail through a fixed focus.

No more new household refrigerators to sell, of course, but plenty to service.

And of refrigeration systems in the medium and larger sizes, more than you have ever known before.

Refrigeration is going into its biggest boom. The war has uncovered an industrial need for refrigeration greater than anything the industry dreamed of this time a year ago.

REFRIGERATION IS THE NEW MACHINE TOOL.

Say, you ask, what about all this? Where have I been? What's going on? Where's my part in this picture? Can I stay in business, and still help Uncle Sam in his war against the brutes?

There's a time and place where you can get the answers to these questions and many more. It's something no ambitious refrigeration man—jobber, service man, dealer, engineer—can afford to miss if he wants to get in on the ground floor. It's something every patriotic refrigeration man must attend if he is to do his bit toward winning the war.

It's the ALL-INDUSTRY MEETING at the Hotel Stevens in Chicago, May 11 and 12.

To this meeting will come executives of the War Production Board, officers of the armed forces, industry figures close to Washington, and manu-

facturers of the equipment which is in such great demand now for the prosecution of the war.

Your place in this new picture of the industry will be outlined by these men who are "in the know."

The journey to Chicago which you will make at that time can well prove to be the most important investment you have ever made.

Plan now to attend the All-Industry Meeting in Chicago May 11 and 12.

Extraordinary Price Ruling

ONE might have thought that Washington had already done everything to the household refrigerator dealer that could be done short of kicking him in the teeth and hitting him with the kitchen sink.

Now they've done that.

Amendment No. 1 to Revised Price Schedule No. 102 (household mechanical refrigerators) puts a price ceiling on all refrigerator stocks now frozen at the price to the distributor.

That's the amazing feature of this somewhat complicated order which, by the way, was published in full in last week's Bulletin Issue of AIR CONDITIONING & REFRIGERATION NEWS—the only publication so far (including the newspapers) which has taken note of this extraordinary ruling.

Dealers may continue to sell all on-hand stocks at approved retail prices. However, any person who can get an A-10 rating may now purchase a new refrigerator at the distributor's price.

This goes for one refrigerator as well as an order for 3,000!

If a man wants a new automobile, and can qualify, he goes to a dealer and pays the full retail price (and what a price!).

But, if he wants a refrigerator, he can now go to a manufacturer and get it at the distributor's price.

Imagine the situation in the 1400 block of Toolmakers Street when Neighbors Jones and Smith have recently purchased new refrigerators at retail prices, only to learn that Neighbor Brown has just bought one at the distributor's price. Can't you just picture the scene in Dealer Fallguy's store the next morning?

According to this order, there will be available to "persons with preference rating" no less than 569,340 refrigerators by April 30. Those refrigerators would keep a lot of good taxpaying dealers in business for many more months.

Instead of selling these refrigerators through regular retail channels, however, it is proposed to use them to compete on ruinous terms with the dealers who still have refrigerators.

Rationing in itself is discriminatory, even though it may be deemed necessary in time of war. But to allow "those with preference ratings" to buy for much less than those who bought before rationing began is something which will stir up no end of resentment.

Passing a death sentence on appliance dealers may be necessary because of the war. But appliance dealers didn't start the war. They aren't Germans or Japs. Why treat them as if they were?

We say: If 569,340 refrigerators are to be made available to "persons with preference rating," let those privileged persons buy them through authorized

They'll Do It Every Time

By Jimmy Hatlo



NEWS TOOK 8 1/4 MONTHS TO GET TO INDIA BUT IT WASN'T STALE

38 Queen's Road
Bombay, India

Editor:

How War has affected the deliveries of mails to India and elsewhere will be illustrated by the experience we had which will be hard to beat regarding the receipt of "NEWS" copy dated June 11, 1941. You will be surprised (and this is putting it very mildly), that this copy reached us on 18th February, 1942, or exactly after eight months and seven days.

We have known of instances of late deliveries of American and foreign mails in these difficult days, but never was an instance of a piece of mail taking as long as 8 1/4 months, and I believe this must be the slowest journey the AIR CONDITIONING & REFRIGERATION NEWS has ever made to any destination in any part of the world. We did have occasions of mails taking three, four, or five months from U. S. A., but never as many as 8 1/4 months, so I thought you would be interested to know about it.

When I opened the wrapper and found the date on the top of the publication I rubbed my eyes to see that I was correctly reading "June 11, 1941." There was no mistake about it and post marks on the wrapper bore out the date of delivery here to be 18th February, 1942.

Yet the NEWS was not a bit "stale" or lacked my interest despite its "age." Your leader, "Disturbing the Ivy" was very interesting indeed, and Jimmie Hatlo's cartoon of "Mr. Bloater" was excellent. The article on the "Calorimeter developed by Gale" was very informing, and other subjects were still "news" to us. So it made little difference to read these matters after eight months of printing.

Business has become definitely worse. In fact it is indescribably bad, supplies are almost impossible to obtain, and we do not know how to carry on our activities here in refrigeration and air conditioning products. We do carry on our work somehow hoping that normal times may return, but God knows when the world will be restored back to peaceful pursuits of life, and the "Business of Killing" will be over. I do not think anybody is doing anything in the import trade and as U. S. A. has even stopped sending supplies there is nothing to write about "business."

AHMED A. FAZELBHAY

LETTERS

MARSH POSTER WARNS AGAINST WASTING MATERIALS

Jas. P. Marsh Corp.
2073 Southport Ave.
Chicago, Ill.

Editor: RE: Conservation of Vital Materials

We recently produced a poster dealing with the above subject for use in our organization. The results obtained have been so highly satisfactory that we think other plants can benefit in similar fashion through its display.

Under separate cover we are sending you a specimen of the poster as produced for our use. It is approximately 22 inches x 30 inches in size and printed in red, white, and blue. The attached reduced illustration in black and white will give you the copy but the original is much more colorful and attention-getting.

We have had our printers produce a quantity of the full sized red, white, and blue posters with the name space blank and we are going to make them available in reasonable quantities to anyone for the asking.

You have our permission to reproduce the poster in your publication together with the offer of a reasonable quantity.

Incidentally, if you want a few additional copies for distribution in your office and plant we shall be glad to send them to you.

A. D. ROSS

P.S. For those who may wish a large quantity of this poster they can be obtained from our printer merely for the cost of printing.

DON'T WASTE IT!

EVERYONE agrees that production will win the war. The greater the production—the more efficient the production—the quicker the victory will come.

But . . . production rests on material. And material is so scarce that our government has found it necessary to ration it.

The work we are doing here is sufficiently essential to earn us the privilege of obtaining some particularly scarce and vital materials.

That means jobs for us and the privilege of doing our part.

Let's not abuse this privilege! Let's show our appreciation of it by doing everything in our power to prevent waste and spoilage of metals and materials of all kinds.

Save materials here; save them at home; save as you have never saved before. Every ounce of metal and material you save is a contribution to victory for

ALL OF US
Jas. P. Marsh Corp.

NEWS 'IS ONLY STANDARD WHERE INDUSTRY CAN RALLY'

Mechanical Refrigeration Supply Co.
Office 309, 32nd St.
Huntington, W. Va.

Editor:

Thanks for Directory, certainly appreciate it. From my viewpoint your paper is the only standard around which the industry can rally.

And you have done an outstanding job, more power to you, am ever at your services.

ROY MCELHANEY

NO. 1 GOOD, BUYS THE LOT

225 E. Springer St.
Philadelphia, Pa.

Sir:

I received Master Manual No. 1, and I am very much satisfied with it. It sure is very clear and concise so I am requesting you to send No. 2, No. 3, No. 4, and No. 5. They sure will help me out immensely.

DAVID McCRAE

Smaller Contractors Get 100% Financing Aid In War Work

WASHINGTON, D. C.—Breaking an important bottleneck within the Federal Government itself affecting the participation of little firms in war production, President Roosevelt recently issued an executive order under which the Army, Navy, and U. S. Maritime commission may make or guarantee loans to provide working capital for armament contractors or subcontractors.

The President's action meant that the Federal Government placed tanks, airplanes, and guns for the armed forces above the possible loss of dollars.

"Full production of the nation's smaller businesses is essential to victory," said the President, adding that the order is aimed at curing a situation which has interfered with all-out participation of many small business enterprises in war production.

WILL SPEED PRODUCTION

The formal White House statement declared that "peacetime restrictions on credits cannot hold up production of war supplies needed by the armed forces."

Donald M. Nelson, War Production Board chairman; Robert P. Patterson, under-secretary of war; James V. Forrestal, under-secretary of the Navy; and Rear Admiral Emory S. Land, war shipping administrator and chairman of the Maritime commission, joined in the declaration that the order "will greatly speed the war production of small business and subcontractors generally."

The basic purpose of the production order under which loans will support operations of the banks, Federal Reserve system, R.F.C., and other credit agencies, is to put working capital financing on a war basis, the White House announcement declared.

RESTRICTIONS ON BANKS

"Peacetime restrictions on banks and credit agencies have made it difficult for them to finance war production although the banks have been anxious to use their resources for prosecution of the war," President Roosevelt explained.

These guarantees will not be made under peacetime credit rules and will be made by production men wherever additional financing is essential for additional production, he said.

Under-Secretary Patterson stated that a small business enterprise, which had a normal annual turnover of \$100,000 in peacetime products, might now find itself with \$5,000,000 worth of war subcontracts on its books. Unless easy money was provided, he continued, the concern probably would not be able to meet its charges for labor and raw materials.

PREVIOUS STATUS

Until today, Mr. Patterson added, the War Department had been authorized by law to advance up to 30% of the contract cost to prime contractors and to make no loans whatever to subcontractors. Under the new policy each of them may be helped as much as 100% if necessary.

Issued under authority of the First War Powers authorizing him to shift legal authorities from one branch of the government to another, the President's order provides that the three arms procurement branches may contract with the Federal Reserve Banks, the Reconstruction Finance Corp., or any other banking institution to make loans to businessmen certified by the Procurement branch.

The executive order was drafted by the WPB, the Army, Navy, and Maritime commission.

Change Heating to Coal, Homeowners Advised by U. S.

WASHINGTON, D. C.—Home owners in Atlantic Coast States, and in Washington and Oregon were warned today to change back from oil to coal heating by Dan A. West, director of the consumer division, Office of Price Administration.

"Because of oil transportation difficulties, householders in these areas who have coal furnaces and boilers which have been converted to oil should change to coal at once by re-installing the grates," Mr. West said.

Transfer of some tankers to war service and loss of some others through enemy action caused the WPB to issue a curtailment order through the Office of Petroleum Coordinator on March 14 limiting consumption of fuel oil used for industrial and commercial purposes and for house heating and water heating.

In answer to numerous questions which have been put to the Consumer Division as a result of this order, Mr. West issued the following suggestions for home owners:

1. Home owners in these states who have coal boilers and furnaces which have been converted to oil, and for which grates are on hand or available from manufacturers, should install grates now. In addition, they should order their coal for next heating season now.

2. Householders in these states who up to now have planned to use any type of oil heating equipment next winter, including oil-fired "space heaters" and parlor stoves, should consider switching to stoves which will be fired by wood, coal, or coke.

3. Where possible, water heating equipment fired by wood, coal, or coke should be used in place of water heating equipment fired by kerosene or fuel oil.

4. Home owners who continue to use fuel oil or kerosene for house heating and water heating, in the affected states, should make especially intensive efforts to avoid wasting fuel.

Indications are that as the war continues there may be need for additional steps to curtail the consumption of petroleum products in the Pacific Northwestern and the Atlantic Coast States.

Insulating Board of Mineral Wool New In Armstrong Line

LANCASTER, Pa.—A mineral wool board type of insulation for cold storage rooms and equipment has been introduced by the Building Materials division of the Armstrong Cork Co. as a permanent addition to the company's line of low temperature insulation products.

This new insulation is a non-priority material and is available for all kinds of installations.

Armstrong's "Mineral Wool Board," which has been developed and proved in more than 200 installations within the past six months, is said to equal or exceed Federal specification HHM-371 for board or block form insulation, having a thermal conductivity as determined by tests of average material produced ranging from 0.31 to 0.33 at 90° F.

This new material has good moisture resistance and has ample structural strength for satisfactory handling in erection. It is self supporting and will stay permanently in place without sagging, settling, shrinking, swelling, or warping. The new product additionally is free from objectionable odor and from any liability to rot, mold, or vermin.

It is produced in board size of 12 inches x 36 inches and in thicknesses of 3 inches, and 4 inches, the minimum 3 inches, and 4 inches.



Now that the nation is at war, we in the refrigeration industry must provide, more than ever before, dependable refrigeration equipment and service to preserve foods and prevent spoilage. This means that condensing units must give extra protection without taking time off for a rest.

Brunner is doing its share by providing dependable, efficient refrigeration units for use in all

the food industries. Constructed of the finest materials by expert craftsmen using the finest equipment, Brunner condensing units give trouble-free protection for years on end. Besides their economical operation keeps costs low. Insure against refrigeration equipment that takes time off, specify Brunner condensing units for sure food protection. Brunner Manufacturing Company, Utica, New York, U. S. A.



BRUNNER MODEL W - 200

2 h. p. water-cooled condensing unit for large soda fountains and large walk-in coolers or a battery of market display cases.

Frozen Food Research Made By U. S. Dept.

CHICAGO—Research on frozen foods is among the timely projects being carried on by the Bureau of Agricultural Chemistry and Engineering, U. S. Department of Agriculture, in its four regional laboratories, it was pointed out by Dr. Henry G. Knight, chief of the bureau, in addressing the Eighth Annual Chemurgic Conference.

Secretary Wickard has called for large increases in the production of many of our agricultural commodities," Dr. Knight said. "This program not only meets with general approval, but there have already been large increases in the production of milk and eggs and some of the other commodities. The question that naturally arises in connection with this increased production is, how is the best way to store and keep these products until they are consumed?

"The ever-normal granary seems to be serving a good purpose in that field. The dehydration work that we are doing and the frozen pack investigations that are under way in one of our laboratories will all contribute to this general objective of saving the foods we are striving to produce in larger quantities."

Imperial Brass Gets U. S. Ordnance Flag

CHICAGO—Imperial Brass Mfg. Co. received the coveted Army Ordnance Flag on Army Day, April 6. The presentation was made by Lt. Samuel Pace of the Chicago Ordnance District to Frank McNellis, president of the company.

In a message from Col. D. Armstrong, Deputy District Chief of the Chicago Ordnance District, the employees were asked to continue to assist in every way possible toward making the war program a success.

The brief ceremonies were broadcast over the company's loud speaker system to all employees.

Imperial products are used on Army and Navy aircraft, naval vessels, army motorized equipment, in Army cantonments and Naval bases, and by many plants making vital defense products.

'Frostrode' Welding Is Described In Booklet

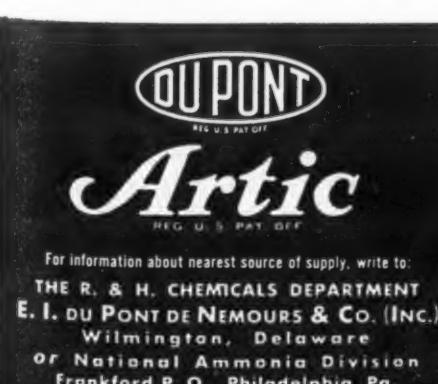
DETROIT—The "Frostrode" process of refrigerated welding, through which welding electrodes are actually so cold as to be continually covered with frost, is described in a new four-page bulletin just issued by the Frostrode division of Weltronic Corp.

In addition to greatly increasing spot weld runs between tip dressing, this method overcomes, by eliminating undesirable heat at the electrodes, many difficulties hitherto encountered in armor-plate and aluminum welding, according to claims made.

**TO ASSURE QUICKER DELIVERIES
RETURN EMPTY CYLINDERS PROMPTLY!**

There is a shortage of cylinders for refrigerants. If you will return your "Artic" Methyl Chloride containers as soon as empty, your deposits will be

repaid immediately—and you will prevent delays in shipments of "Artic" to your shop! Round up any empties you have now and ship them back!



At Chicago—Industry and Government Experts Will Address All-Industry Meeting

Limit on Shellac Will Cut Production Of Phonograph Records To 30% of '41

WASHINGTON, D. C.—The War Production Board in an order taking effect April 14 reduced the output of phonograph records and radio transcriptions to approximately 30% of 1941 production by limiting the amount of shellac available to that amount.

Order M-106, issued today by J. S. Knowlson, Director of Industry Operations, also freezes 50% of all inventories of shellac of 10,000 pounds or more and 50% of all future imports.

Reason for the action on phonograph and transcription records is that these uses normally consume approximately one-third of the annual shellac consumption of the United States.

Experiments now are being made to find a suitable substitute for these uses and reclaiming of old records probably will be tried out.

Uses other than the manufacture of recordings are restricted to 75% of the corresponding period of 1941 until June 30 and 35% by quarters thereafter.

Reason for the drastic action is



that India is practically our sole source of shellac and supplies are subject to shipping hazards. Direct military requirements are heavy and use of shellac is necessary in certain essential civilian processes.

These uses are excepted from the restrictions of the Order:

Electrical equipment, coatings for munitions, military explosives and pyrotechnics, navigational and scientific instruments, communication instruments, marine paints for vessels other than pleasure craft, grinding wheels, wood patterns for metal castings, health supplies as defined in P-29, and in scientific research.

Persons who had on April 1 possession or control of 5,000 pounds of shellac are required to file with the WPB by May 9 a report on Form PD-334.

Shellac is defined in the order as lac of all grades, but does not include lac which has been bleached, cut, or incorporated into protective or technical coatings.

Stocks frozen by the order may be sold by the manufacturer to the Defense Supplies Corp.

Reason for the action is

WASHINGTON, D. C.—The War Production Board on April 16 amended the electric heating pad order (L-84) to permit manufacturers to use up inventories which cannot be used for other purposes, but to stop production entirely on June 30, 1942.

The original order restricted 1942 production of home-type electric heating pads to 50% of the number manufactured in 1940 and restricted production of hospital-type pads to 100% of the number produced in 1940.

The amendment No. 1 allows a manufacturer to use up inventory even though resultant production exceeds his original quota.

3 - RING PISTONS In All PAR Models!!!

PAR compressors are really engineered . . . built like a fine automobile. That's why they are equipped with 3-ring pistons . . . one oil and two compression rings. When you buy a PAR unit, you get pistons—not "plungers."

Slower operating speeds . . . long piston strokes . . . reduced friction and lower operating temperatures—these eliminate excessive wear . . . keep maintenance costs at a minimum . . . insure long life.

PAR Refrigeration Equipment

See your jobber's display of PAR equipment . . . or write the factory for your copy of the FREE PAR CATALOG "A"—a manual for service engineers!



'Revolving Stock' of Reconditioned Boxes Seen

Estimated Stock of 800,000 Units Could Be Re-Traded

PHILADELPHIA—National Refrigerator Market Report, Inc., publisher of the refrigerator "blue book," believes that there is a stock of possibly 800,000 "as is" or traded-in refrigerators now in the hands of dealers throughout the U. S.

This constitutes a potential "revolving stock" it is pointed out which will allow dealers to engage in the refrigerator business for some time to come. This might mean that if 600,000 of the 800,000 were reconditioned and sold to customers on a replacement basis, dealers might obtain 600,000 more boxes of which perhaps 450,000 might be reconditioned, thus providing a more or less revolving stock of such units.

The "blue book" publishers have included both technical and merchandising aids in their 1942 edition, and a minimum standard for rebuilding operations.

Among the merchandising aids is an "advertising matter service" which makes available mats of rebuilt refrigerator advertisements and drawings of many typical refrigerator models. The mats are mortised to permit insertion of the dealer's own copy.

Three Types of Tie-Ins With War Effort Are Suggested by Scaife

NEW YORK CITY—Believing a triple problem merits a triple solution, Arthur L. Scaife, General Electric Co.'s appliance department merchandise manager, presented both problems and suggested solutions for the electrical industry as a part of the Modern Kitchen Bureau's Press Service program at the Edison Electric Institute General Power conference held recently at Chicago.

He pointed out, first, the need of continued advertising, so that electrical living in the home through electrical appliances is not forgotten; second, advice to people who had purchased electrical equipment as to how they can make it last longer because they cannot get replacements, and how to get better use of the food they use, prepare, and preserve with electrical appliances; third, an increasing tendency for planned economy or Government management of business and free enterprise.

In attacking this three-fold problem, Mr. Scaife stated that the Bureau was well aware of the common sense attitude dictated by patriotic public sentiment about appliance sales and of the Government effort to provide wide-spread information to the public on the better utilization of merchandise, vitamin-content meals, general nutrition, and better planned meals.

Along the same line, Mr. Scaife explained three different newspaper campaigns as an approach to the total problem.

Campaign A—Tied in directly with the nation's all-out war effort, this campaign idea suggests a way to dramatize the part electricity is playing in the kitchens of America to conserve food, time, and money.

Campaign B—Recognizes the present shortage of appliances and gives the user definite suggestions on how to use them so as to get the most out of them and keep them in first-class working order.

Campaign C—Features the need to conserve precious vitamins and minerals, and how the owners of electrical appliances can use their appliances to accomplish that.

Landers, Frary & Clark Man Takes OPA Job

WASHINGTON, D. C.—Harold R. Brumbaum, sales manager of the department store division of Landers, Frary & Clark, Inc., has been named as senior business specialist in charge of cutlery and allied products for the hardware and houseware unit, Consumer's Durable Goods Section, Office of Price Administration.

PRICES ARE SMASHED ELECTRIC REFRIGERATORS

FULLY REBUILT AND GUARANTEED!
THEY WORK JUST LIKE NEW!
THEY LOOK LIKE NEW!

\$49.50
AND UP
EASY TERMS

4, 5, 6, 7, Cu.
Ft. Sizes. Floor
Models.
Demonstrators,
Discontinued
Models.

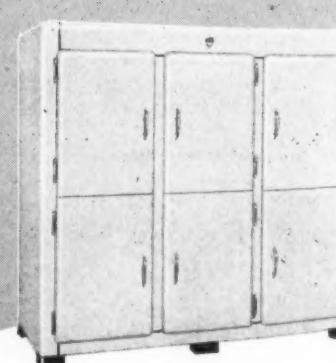
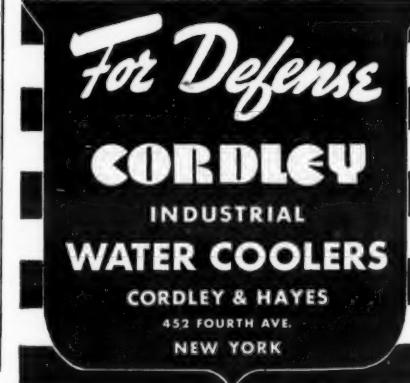
Every box has been fully rebuilt, refinished and reconditioned to a state of "good as new".
Dozens of models. Phenomenal savings!

APPLIANCE SHOP, INC.
GREEN AND FAIR STREETS
WRIGHTSVILLE
Open Tuesday and Saturday Eves. till Nine

This is one of the types of advertisements for selling reconditioned refrigerators suggested by National Refrigerator Market Reports, Inc., publisher of a refrigerator "blue book."

Bert Wells Heads Up Service For Patterson

NEW ORLEANS—C. T. Patterson & Co., distributor here, has named Bert Wells, formerly president of Bert Wells Co., automobile dealer, to manager of the commercial refrigeration service and sales department. Robert Cochran was appointed service manager for the New Orleans area. Although an automobile dealer, Mr. Wells has had much experience with refrigeration.



Model 120 (above) has 12 cu. ft. capacity—the newest member of the "Midwest 'Reach-in'" family.

Model 700 (right) another new model has 71.5 cu. ft. capacity. In between is a full range of sizes and equipment. Write for full details now.

Midwest

MFG. COMPANY
Galesburg, Ill., U.S.A.

Export Division, 176 W. Adams St., Chicago
New York Office, 1775 Broadway

Men Who Man New Posts at Airtemp



V. P. BLACK



RALPH C. CAMERON



PAUL H. DOW

COME to CHICAGO
for
first hand word direct
from your suppliers
regarding
DELIVERIES



Mills Condensing Units
By Mills Novelty Company
4100 Fullerton Ave., Chicago, Ill.



Telephone Puts Across Concise But Pointed

Sales Talk To Busy Industrial Prospects

CHICAGO—An average of 40% appointments are resulting from calls in a current telephone canvass of all war plants in this vicinity by the salesmen of L. C. Kohlman, Inc. to provide prospects for Airtemp packaged air conditioning. Ralph C. Cameron, regional sales supervisor, reports.

Seven Kohlman salesmen are working on a selected list obtained from the Chicago Association of Commerce.

Emphasizing increased production through the use of packaged air conditioning, a complete suggested telephone canvass has been worked out:

"My name," says the salesman in his first step in telephone prospecting, "is Mr. Blank, an engineer with L. C. Kohlman, Inc. Will you please give me the name of your production manager? May I speak to him please? (If he is not available), may I talk to someone associated with him?

"Mr. Smith, I am Mr. Blank, an engineer with L. C. Kohlman, Inc. here in Chicago, contractors and distributors for a line of equipment manufactured by the Chrysler Corp. which has definitely proven itself in stepping up production in plants such as yours, and would welcome the opportunity of coming out and discussing it with you. (In case of a direct question don't evade the answer.) Here's how it will aid you."

At this point the Kohlman sales-

man uses a typed card containing a list of 13 advantages for packaged air conditioning in a war plant.

The card reads:

1. Makes closer tolerances possible.
2. Protects finish.
3. Helps prevent rust and corrosion.
4. Prevents deterioration and spoilage.
5. Permits processing under uniform temperature and humidity conditions.
6. Removes injurious gases and foreign matter from air.
7. Removes odors.
8. Eliminates explosion factor.
9. Reduces fire hazard.
10. Increases employee efficiency.
11. Reduces time lost on account of illness.
12. Enables year around operation.
13. Makes industry independent of climate."

Then the salesman points out a number of prominent Airtemp jobs in the Chicago area. Each time there is a pause in the conversation the salesman tries for an appointment.

If the prospect says that he has air conditioning equipment, the salesman replies, "We have a service organization servicing 11,000 accounts in the city of Chicago, including all types of refrigeration, air conditioning, and water coolers of which you, no doubt, have several. Can we be of service to you?"

'Capillary Cell' Type of Air Cooling Described

NEW YORK CITY—A bulletin just issued by the Air & Refrigeration Corp., 475 Fifth Ave. here, describes the "capillary cell" and its application in air conditioning equipment as a direct heat transfer surface between water and air.

Described in the bulletin are the standard cells, which have a face area of 20 x 20 inches, are 8 inches in depth, and are filled with glass filaments, arranged essentially parallel to the flow of liquid and air, thus offering low resistance to airflow.

Outlined are the functions of the cells for cooling and dehumidifying, humidifying, air cleaning, evaporative cooling, condenser water cooling, fume absorption, etc.

A section is devoted to a description of standard central station units ranging in capacity from 4,400 to 132,000 c.f.m.; as well as to self-contained units which include fans, heater, pump, etc., in an insulated casing, with a capacity range of from 4,000 to 16,000 c.f.m.

Engineering and performance data are presented in convenient tabular and graphic form for the use of the engineer in determining capacities.

A saturation efficiency of 97% is claimed for the capillary cell when supplied with as little water as 3 g.p.m. per 1,000 cu. ft. of air at a nozzle pressure of 6 lbs.

This capillary cell system is recommended by the company for evaporative cooling in sections of the country where high humidities are not prevalent. It is also pointed out that no critical materials are involved.

★ service engineers... jobbers ... manufacturers!

You can't afford to miss the

ALL-INDUSTRY MEETING and CONFERENCE-CLINIC

STEVENS HOTEL, CHICAGO * * * MAY 11-12-13

It's your duty to yourself, your industry, and your Nation to attend this most important meeting in the history of the Refrigeration and Air Conditioning Industry.

Leaders in your Industry and important Officials from the War Production Board will discuss and answer today's most momentous questions of priorities, repair and maintenance parts, conservation of War materials, Military and Naval demands on Refrigeration, and many other subjects that seriously effect your daily work—and your cooperation in TOTAL WAR.

Your own future business—and your country's VICTORY—depend on YOUR attendance at this All-Industry Meeting and Conference-Clinic. DON'T MISS IT!

* *
AUTOMATIC PRODUCTS COMPANY
3150 NORTH THIRTY-SECOND STREET
MILWAUKEE, WISCONSIN
Export Department 100 Vanderbilt Street, New York City



DEPENDABLE
Refrigerant Valves

Small Firms' Participation In War Work Calls For Initiative and Ingenuity

Men From a Firm Converted 100% Say: Go In Person To Find Out About War Work

WASHINGTON, D. C.—Two years ago, one of the many small, ambitious manufacturing firms in an eastern city was grinding out aluminum frying pans, egg poachers, radio dials, and control devices, but today it has converted its machines 100% to production of percussion caps, struts, flap hinges, and other bits and pieces for aircraft.

Two years ago the two young owners of this firm were well satisfied with the progress made by their company, formed in 1937. But then came the collapse of the French and the beginning of a defense program.

It was clear that America would need tens of thousands of aircraft. Planes meant aluminum. Would there be enough aluminum for both radio devices and aircraft? That was the question they asked themselves one hot afternoon in their crowded office as they reviewed their orders. Would they get enough material to keep their score or so of workers employed?

As one said the other day, "We had two ideas that we talked over. One was that there wouldn't be enough aluminum for firms like ours and the other was that we ought to help our country."

They had been producing parts on a subcontract basis. Why not go after defense work in the same manner? Checking lists of plane manufacturers in the east, they

started out at once to see what business they could get.

At first the concern bid only on jobs it could handle with its existing machine tools. Later, it expanded a little, adding such equipment as pipe and tube bending machinery. Today there are 40 men on the payroll; the day shift of 28 works 10 hours, six days a week; the night shift of 13 works 10 hours, five days a week. New employees have been selected from training schools because of their manual dexterity and have been given intensive training on their own machines.

The partners visited the OPM regional office in May, 1941, soon after it was established in their city. While most of this firm's work was obtained through its own resourcefulness, several contracts were obtained with the field office's assistance. Among these was an experimental order for soundproof aluminum enclosures for auxiliary motors. During negotiations an OPM engineer familiar with the concern's facilities advised both prime contractor and subcontractor on problems facing them.

The aluminum covers for auxiliary engines were designed by the firm for use on giant bombing planes. On four-engine bombers, to lighten the burden on the main motors, auxiliary engines are used to retract landing gear and for other purposes. These

are covered by aluminum enclosures which, when sprayed with liquid rubber, at once protect the motor and deaden the sound.

What advice does this successful subcontracting firm give to others?

The concern has two thoughts on this:

"At first bid only on products that you can make with machines you have in your shop and can surely handle. And always remember—a letter will bring you blueprints and invitations to bid, but you will never get a contract unless you go to the plant and keep after the prime contractor. When you go, take your engineer along, too, so they know you have the goods."

Lyon Co. Prints Story of How It Got Contracts

AURORA, Ill.—"How One Company Tackles the War Production Problem" is told in a booklet issued by the Lyon Metal Products, Inc., here, describing how one American manufacturing concern, faced with the loss of over half its business, planned and executed a plan to obtain prime contracts and subcontracts.

The booklet outlines in detail the company's own W.P.B., a committee that meets every day to coordinate all divisions of the business on the problem of fitting the company into the war production picture.

"Coordinated action" is stressed in the booklet, which may be obtained from Lyon Metal Products, Inc.

Dealers Who Wish To Convert Shops Should Visit Contract Distribution Branch

— Refrigeration Co.
Alton, Ill.

Editor:

In one of your recent issues, I read where an appliance company had recently secured an order through the WPB Office for a small radio gadget.

Our firm employs 20 people who have been employed by us for several years. We have a well equipped shop that is operated by men qualified as electricians, radio repairmen, refrigeration and air conditioning servicemen, also an experienced air conditioning and refrigeration engineer.

I wonder if you can give us any information on any items that we would be able to produce for the WPB or any items that we could secure through prime contractors.

We have turned our Cooking School Auditorium over to the American Red Cross for the duration of the War, and we believe we could do an additional bit for the Government and at the same time hold our organization together by securing contracts for some small items.

Trusting that we may hear from you, we are,

(signed) —, Manager

Where to Go, What to Take

Answer: We aren't able to tell you just where to go to pick up a contract for some part of the war effort, but we can direct you to possibly the best source of information on matters of this kind.

That would be the nearest large War Production Board (WPB) office, which in your case would be St. Louis. If you are really serious about going after this kind of business, it would be worth your while to spend a day going into the matter with the WPB office. If you don't know the address of your office, the telephone information service should be able to give it to you without any difficulty.

Be sure to take with you, preferably written down, all the information about your company—particularly detailed information on any machine shop equipment that you may have and full information on the abilities of your personnel, listing all the skills of your shop workers and other company personnel.

You will probably be referred sooner or later to the Contract Distribution Branch of the WPB, which has the job of seeing to it that small business gets a share of the war production effort. They should be able to tell you about the type of work in which you might fit, and you should ask them to be put on the list for their weekly mailings (done by most local offices) of subcontracting work that is looking for a taker. This branch should also be able to tell you about getting on the list for direct War and Navy bids if there is a possibility of your handling any of their work.

If you will take these steps and then follow closely the advice that is given, you will at least have placed yourself in a position to take advantage of any opportunity that may come your way.

One of the regional offices has described the functions of the Contract Distribution Branch as follows:

Functions of the Branch

Purpose: The WPB Contract Distribution Branch does not purchase or place orders for the government, but rather assists in distributing war production contracts to more manufacturers, finds contractors with plant facilities to produce items currently required by the government, aids in speeding and spreading subcontracts, furnishes engineering advice, conducts exhibits of parts for which subcontractors are desired and offers advisory financial service.

How to Use: To avail yourself of these services, contact your nearest Contract Distribution Branch, and:

- If you have not submitted a list of your production facilities, ask for the "Facilities Record" form provided for this purpose.

- Fill out and return this form to your WPB office as soon as possible.

Engineers at the office will aid you in filling out the record.

3. When this form is returned to your WPB office, your firm will be placed on the mailing list to receive "War Production News" which is issued periodically.

4. To obtain bidding forms on prime contracts listed in "War Production News" wire or write direct to the buying agency as listed under the column headed "Buying Agency." The address of the buying agency will be found on one of the last pages of the above publication. The number listed under the column headed "Invitation Number" must always be mentioned when requesting bidding forms. Photostats of bidding forms may be made at your expense, when little time remains before closing date for bid. These may be used in submitting bids.

5. You will receive earlier notice of requirements if you are listed with governmental buying agencies to receive invitations to bid direct from them. Your WPB office will be glad to tell you how to have your firm listed to receive invitations on those items which your equipment can produce.

6. If you want information, advice, or engineering assistance, contact your nearest WPB office and consult with one of the engineers.

7. If you have more War work than you can keep up to schedule, or if you want help on subcontracting or on expediting deliveries or on any other problems of production, your WPB office has engineers available for this purpose.

8. If you need financial aid in connection with War work, take it up with your WPB office. There is a financial specialist there to help you.

Financial Aid

The Bureau of Finance, which has several branches usually located with the branch offices of the War Production Board, has as its purpose the assisting of those firms producing War materials where lack of capital is impeding or handicapping production. It collaborates with the appropriate public or private agencies to facilitate the granting of financial assistance or credit to industries to further their effective contribution to the War Program.

It advises and assists producers and contractors regarding the proper source of needed financial assistance and aids them in the presentation of their requests to suitable agencies.

Businesses confronted with financial problems in connection with their War effort should contact the Bureau of Finance and personally present the problem to the financial representative.

Philco Makes Report on Earnings, War Work

PHILADELPHIA—Philco Corp. in 1941 earned net income, after taxes, of \$2,513,569, equivalent to \$1.83 per share on each of 1,372,143 shares of common stock, as compared with \$2,248,568 or \$1.64 per share in 1940, despite much higher taxes, according to the company's fiftieth annual report issued this week by James T. Buckley, president.

Accelerating the process of conversion to war production, Philco Corp. is now turning out communications equipment, radio receivers for tanks and airplanes, ammunition, artillery fuses, and industrial storage batteries under Government orders, the report stated.

"Realizing the invaluable contribution wholesale distributors and retail dealers have made to the success of the company in the past, efforts have been under way for some time to secure new products for them to sell for the duration of the war," Mr. Buckley said. "In addition, with the company's assistance, many distributors and dealers are preparing to handle a much larger volume of service business than heretofore in keeping existing electrical appliances in operation."

Gross sales of all Philco products last year amounted to \$77,073,636, as compared with \$52,311,131 in 1940.

INDUSTRY ANSWERS THE CALL!



32,145 Firms With Over 17,700,000 Employees Have Installed the . . . PAY-ROLL SAVINGS PLAN



Plan Easy to Install

Like all efficient systems, the Pay-Roll Savings Plan is amazingly easy to install, whether your employee number three or ten thousand.

For full facts and samples of free literature, send the coupon below—today! Or write, Treasury Department, Section C, 709 Twelfth Street NW, Washington, D. C.

MAIL THIS COUPON NOW

Treasury Department, Section C
709-12th St., NW
Washington, D. C.

We want to do our part. Please rush full information regarding the Pay-Roll Savings Plan.

NAME.....
POSITION.....
COMPANY NAME.....
ADDRESS.....
NUMBER OF EMPLOYEES.....

U. S. DEPARTMENT OF THE TREASURY

MAKE EVERY PAY-DAY... BOND DAY!
U. S. Defense BONDS ★ STAMPS

What to Check When Electric Motor Does Not Start

Motor Troubles & Their Correction

Editor's Note: Following is part of a section on servicing motors, in a series of articles on motor construction and operation.

By R. A. Fuller,
Industrial Engineering Dept.,
General Electric Co.

Complaint - -

B. Motor Does Not Start

15. Centrifugal Switch Failure

"Centrifugal switch failure" may be that the switch fails to open when the motor is started; fails to close when the motor is stopped; or operates at the wrong speed. If the switch fails to open, when the motor is started, the motor speed tends to be lower than normal, the motor tends to be noisier than usual, the motor draws more current than usual thus tending to trip the overload and, if the motor is allowed to run very long the capacitor will probably burn out.

An inspection of the switch may show that the contacts have welded together or that the centrifugal mechanism is not functioning properly. Welded contacts can often be repaired by breaking the weld and smoothing up the contact surfaces by light filing. Failure of the centrifugal mechanism may be due to binding, friction, wear, or dirt.

Another possible cause of this trouble may be the endplay of the motor. If the endplay is such that

the rotor can be too far toward the switch end of the motor, it may be possible for the centrifugal mechanism to operate without opening the switch. This can be checked by removing the switch end shield and rotor from the motor and, with the rotor in the end shield, observe the switch action when the mechanism is operated by hand.

If the switch fails to close, when the motor stops, the motor will fail to start. This may be an occasional failure to start or a consistent failure to do so.

Push in on the pulley end of the motor shaft thus moving the rotor as far toward the switch end of the motor as the end play will permit and then apply power to the motor terminals. If the motor starts under these conditions try the same thing again except, this time, pull the shaft in the other direction so that the initial position of the rotor is as far away from the switch end of the motor as the end play will permit.

If the motor now fails to start, it is probable that the motor end play needs adjusting—the addition of more washers on the end farthest from the switch. The switch may also fail to close if there are defects in the switch or in the centrifugal mechanism. In every case where the switch has failed to close, it is recommended that these be inspected carefully.

If the switch operates at the wrong speed the motor may not have sufficient power to bring the load up to full speed. The switch should operate, when the motor is accelerating, at slightly above three-quarters of the full load speed. It is expected that this trouble will be experienced very seldom. It may be caused by the use of incorrect springs in the centrifugal mechanism or by throwing off of a spring in a poorly designed mechanism.

Centrifugal Mechanism For 'Repulsion Start'

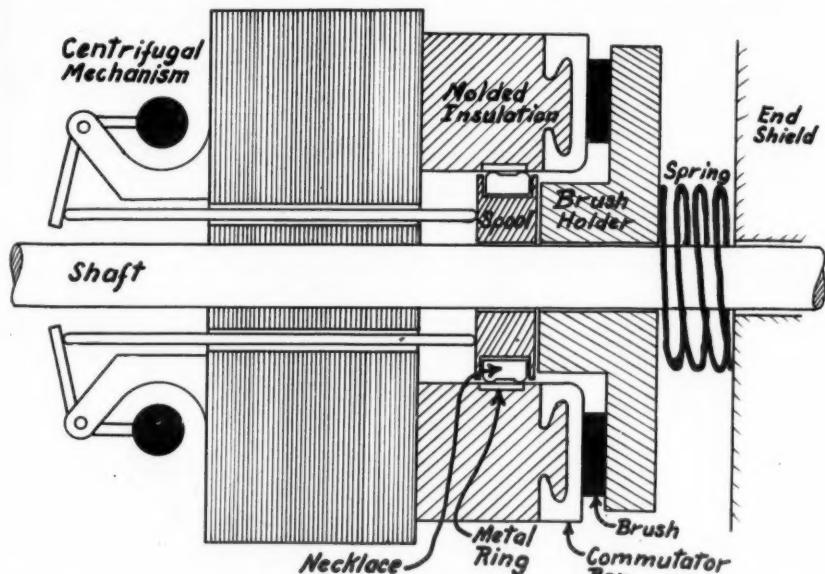


Fig. 44 represents the rotor of a brush-raising repulsion start-induction run motor with the motor stopped. Brush and the commutator bar, and necklace and metal ring are in contact, respectively.

16. Short Circuiting Device Failure

"Short circuiting device failure" may be experienced on single phase repulsion start-induction run motors. When the motor is started it may hesitate at approximately three-quarters speed or it may come up to full speed and then slow down again. Overheating of the motor windings may have occurred as a result of this faulty operation. If the brushes do not raise off the commutator at approximately three-quarters speed it is probable that there is wear, dirt, or too stiff a spring in the rotor mechanism—see Fig. 44.

If the brushes appear to raise off the commutator properly it is probable that there is poor contact between the necklace and the short circuiting ring and commutator segments. Burning of these points of contact will quite likely be observed when the rotor mechanism is disassembled. Some service men make a practice of installing a new necklace to correct this trouble. This will not correct the burned spots on the short circuiting ring and commutator segments. Any damage to the windings will not be discovered. Such a faulty motor should go into the shop for a complete inspection.

A-P Combines Filter, Dryer In Single 'Trap-Dri' Unit

MILWAUKEE — A refrigeration system accessory that dries, strains, and filters the refrigerant is the new "Trap-Dri" which has been introduced by Automatic Products Co. here.

It is claimed for this unit that it stops all impurities such as acid, moisture, gummy deposits, scale, dirt, and solder particles, and that it prevents freeze-ups.

The "Trap-Dri" combines the A-P "Trap-It" element with Silica Gel.



The "Trap-It" element consists of a honeycomb tube, equal in efficiency to a 900-mesh strainer. Use of this item will cause no appreciable pressure drop through the system, it is declared.

Outside shell is of cold roller steel, made in two pieces, atomic hydrogen welded and tested against hundreds of pounds pressure.

The "Trap-Dri" may be installed

ahead of any expansion valve—or attached directly to the valve by a special fitting. It is said to start working immediately upon installation. Generous wrench grips permit easy and quick installation. The units are available in several sizes and capacities to fit any refrigeration system.

Materials For Drums To Go Under Priority Setup June 1

WASHINGTON, D. C.—Beginning June 1, requirements for sheet steel for the manufacture of steel drums, heretofore met by allocation, will be obtainable only on preference ratings, except for urgent military needs, and allocations in April and May will be curtailed sharply, C. E. Adams, chief of the WPB Iron and Steel Branch, has announced.

It is expected drum manufacturers will take immediate steps to obtain necessary preference ratings through the Production Requirements Plan.

During the first quarter of this year complete requirements of drum makers for sheet steel were met by allocation. In line with the policy of the War Production Board to confine allocations to urgent war needs, sheet steel so obtained during April and May can be used in the manufacture of drums only for orders of A-10 or higher.

General Preference Order M-45 will continue in effect and earmarked stocks prescribed by the Order will be maintained by allocation. Future requirements for top military uses also may be met by allocation, but all others must bear preference ratings.

COME TO THE
ALL-INDUSTRY MEETING
CHICAGO MAY 11, 12, 13



It is PATRIOTIC to SELL COMMERCIAL ELECTRIC REFRIGERATION

Because— Uncle Sam has defined for you the ESSENTIAL USES, some of which are—

1. Processing, transportation, storage, preservation and distribution of foods and food products including warehouses, stores, restaurants, hotels and other essential civilian uses.
2. Direct Defense installations such as Army and Navy barracks, hospitals, war production plants for processing and restaurant requirements.
3. YOU DO NOT NEED PRIORITIES TO SECURE IMMEDIATE DELIVERY ON FEDDERS UNIT COOLERS FOR THESE INSTALLATIONS.
4. Fedders will be on hand at the Chicago Clinic with a complete stock list of Unit Coolers for immediate delivery.
5. Take advantage of this NON-PRIORITY STOCK before it is exhausted.

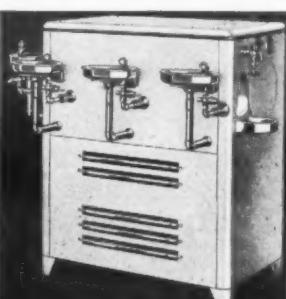
IMMEDIATE DELIVERY
ON THIS NON-PRIORITY
STOCK OF UNIT COOLERS

Fed-R-Luxe
Fed-R-Indirect
Fed-R-Ceiling
Fed-R-Kold
Fed-R-Zero

fedders
BUFFALO, N. Y.

Yes! "DAY & NIGHT"
WATER COOLERS
MEET ARMY & NAVY
SPECIFICATIONS

WRITE
FOR
YOUR
COPY
OF
BUL-
LETIN
NO. 46



DAY AND NIGHT COOLER DIVISION
DAY & NIGHT MFG. CO.
2320 EAST EIGHTH STREET • LOS ANGELES, CALIFORNIA
FACTORY REPRESENTATIVES
NEW YORK CHICAGO
A.C. Homeyer, 682 Broadway • Marc Shantz, 565 Washington Blvd.
DALLAS DECATUR, GA.
Leo J. Freitas, 4408 Stankope St. • J. E. Parker, 228 Second St.
Warehouse Stocks at Convenient Shipping Points

Commercial Refrigeration Repair Order Will Need Considerable Interpretation

(Concluded from Page 1, Column 5) refrigeration equipment in operation with a minimum of scarce materials," it was stated. "If the order is abused—it will be withdrawn. It will be tightly administered."

The Air Conditioning and Commercial Refrigeration Branch of WPB apparently would like those who will operate under the order to make application on Form PD-399, but not to burden their office with correspondence and questions about the order.

Here's what the official War Production Board news release says about the Order.

"The War Production Board has granted high preference ratings for deliveries of materials needed for repairs to air conditioning and refrigeration equipment.

"The top rating—A-1-a—is available in the case of an actual breakdown of equipment used primarily to process, transport, or store food and dairy products for the Army, Navy, or Maritime Commission, or used in cold storage warehouses, meat-packing houses under U. S. government inspection, and blast furnace air conditioning.

"Other ratings, each in the 'A' class, are provided to avert breakdowns of essential equipment and to maintain emergency repair service for existing equipment of all types, except domestic mechanical refrigerators. No rating is available for repairs to household refrigerators.

"The program is set forth in Preference Rating Order P-126, and will be administered by WPB's Air Conditioning and Commercial Refrigeration Branch. Ratings assigned under the terms of the order will be available only until June 30.

"In addition to the A-1-a rating in the case of actual breakdowns of equipment deemed most essential for the country's health and safety, the order makes available the following ratings:

"A-3 to avert an immediately threatened breakdown of any of the types of equipment listed above for which the A-1-a rating is available in case of actual breakdown.

"A-3 in the case of actual breakdowns of equipment used generally to process, transport, or store food and dairy products, including equipment in retail establishments where food is stored or served, and used in manufacturing plants actually engaged in filling Defense Orders as defined in Priorities Regulation No. 1.

"A-8 to avert an immediately threatened breakdown of any of the types of equipment covered in the A-3 classification as listed in the preceding paragraph.

"A-8 for emergency service to all other types of air conditioning and refrigerating equipment, except domestic mechanical refrigerators, and for deliveries of materials needed to maintain an emergency service inventory.

"The ratings may be applied only by designated Emergency Service Agencies and their suppliers. In order to obtain designation, an agency must be regularly authorized to represent a manufacturer, owner, or lessee of air conditioning or refrigerating equipment, and must obtain a serial number from WPB after first making application on Form PD-399.

"J. M. Fernald, Chief of the Air Conditioning and Commercial Refrigeration Branch, said that manufacturers already have submitted the names of several thousand authorized service agencies throughout the country, and that the task of issuing serial numbers would be expedited.

"This is a case in which the manufacturers themselves will have a large share in the policing of this order," Mr. Fernald said. "We are relying a great deal upon their patriotism so that no one will receive a serial number who is not entitled to it. The industry has long awaited issuance of the order. If any abuses develop under it, it most certainly would be revoked."

"In addition to the usual restrictions on use of the ratings to build up excessive inventories, the order lists several critical materials, such as copper, stainless steel and alloy steel, and a number of parts designed for installation in new equipment, for which the ratings cannot be used."

Complete Text of Order Covering Repairs Of Commercial Refrigeration Equipment

WAR PRODUCTION BOARD DIVISION OF INDUSTRY OPERATIONS PREFERENCE RATING ORDER NO. P-126

MATERIAL FOR EMERGENCY SERVICING OF REFRIGERATING AND AIR CONDITIONING MACHINERY AND EQUIPMENT

Name of Emergency Service Agency:

Address:

Serial No.

Date:

Preference Rating Order P-126. For the purpose of facilitating the acquisition of Materials for the Emergency Servicing of Refrigerating and Air Conditioning Equipment (as hereinafter defined), preference ratings are hereby assigned to deliveries of such Materials upon the terms hereinafter set forth:

(a) Definitions. For the purposes of this Order.

(1) "Refrigerating and Air Conditioning Equipment" means any type of machinery, equipment or other apparatus (except a domestic mechanical refrigerator) which is primarily designed to lower the temperature of matter, or to regulate the temperature or humidity of air, by mechanical, chemical or physical means, together with all insulated enclosures, materials, parts, implements, and devices used with such machinery, equipment, or apparatus in causing it to perform its function of refrigeration or air conditioning.

(2) "Emergency Service" means the emergency repair of a refrigerating or air conditioning system (excluding any domestic mechanical refrigerator) which is actually installed, the condition of which renders its operation unsafe or ineffective, including the replacement or reconditioning of necessary parts therefor, whether or not a breakdown has actually occurred. It includes the emergency replacement of equipment which has been worn out, damaged, or destroyed, but does not include the installation of any equipment (new or used) to replace usable equipment or the substitution of equipment of inherently greater capacity than that which it is necessary to replace.

(3) "Emergency Service Agency" means any person (or functioning unit of a person) customarily engaged in the rendering of Emergency Service and regularly authorized to represent a manufacturer, owner, or lessee of refrigerating and air conditioning equipment, provided that such person (or functioning unit) shall have re-

ceived a serial number from the War Production Board in accordance with the provisions of subparagraph (e) (1) hereof.

(4) "Emergency Service Inventory" means the minimum inventory of material required to supply current demands for emergency service. Such minimum inventory shall not exceed the maximum physical quantities of similar items on hand, for similar purposes, on the date of any physical inventory taken in the year 1941. Separate dates for different items may not be chosen.

(5) "Material" means any commodity, equipment, accessory, part, assembly, or product to be used in connection with any emergency service or emergency service inventory except chlorinated hydrocarbon refrigerants.

(6) "Delivery of Material" means the furnishing of facilities for the repair or reconditioning of refrigerating and air conditioning equipment, or any parts used therewith, as well as the physical delivery of any material.

(7) "Supplier" means any person with whom a purchase order or contract has been placed by an Emergency Service Agency or by another Supplier for the delivery of material required for emergency service or emergency service inventory.

(b) Assignment of Preference Ratings. Subject to the terms of this Order, and of any Conservation or Limitation Order issued, or to be issued hereafter, the following preference ratings are hereby assigned, but nothing herein contained shall prevent the use of any other or higher rating to which any person shall be entitled by reason of any other preference rating certificate or Order:

(1) A-1-a to deliveries of material to an Emergency Service Agency for emergency service when, and only when, there has been an actual breakdown of refrigerating or air conditioning equipment.

(i) used primarily for the processing, transportation, and storage of food and dairy products for the Army or Navy of the United States or the United States Maritime Commission;

(ii) in cold storage warehouses;

(iii) in meat packing houses under the inspection of the United States Government;

(iv) in blast furnaces.

(2) A-3 to deliveries of material to an Emergency Service Agency for emergency service

(i) to avert an immediately threatened breakdown or suspension of operation of any types of refrigerating or air conditioning equipment coming under the provisions of subparagraph (b)(1), or

(ii) when, and only when, there has been an actual breakdown of refrigerating or air conditioning equipment used

(a) for the processing, transportation, or storage of food and dairy products [except when coming under the provisions of subparagraph (b)(1)], including (but not limited to) all such equipment in retail establishments where food is sold or served, but excluding domestic mechanical refrigerators; or

(b) in manufacturing plants (other than blast furnaces) actually engaged in manufacturing products under a Defense Order as defined in Priorities Regulation No. 1, where the proper functioning of such equipment is necessary to the completion of such Defense Order.

(3) A-8 to deliveries of material to an Emergency Service Agency

(i) to avert an immediately threatened breakdown or suspension of operation of any types of refrigerating and air conditioning equipment coming under the provisions of subparagraph (b)(2)(ii);

(ii) for emergency service to all other refrigerating and air conditioning equipment (except any domestic mechanical refrigerator), and

(iii) when such deliveries are needed to maintain an emergency service inventory.

(c) Persons Entitled to Apply Preference Ratings. The preference ratings hereby assigned may, in the manner and to the extent hereby authorized, be applied by

(1) an Emergency Service Agency;

(2) any Supplier of material to the delivery of which a preference rating has been applied as provided in paragraph (e);

(d) Restrictions on Use of Ratings.

(1) A Supplier may extend any preference ratings assigned under this Order subject to the following conditions [and subject to the conditions stated in subparagraph (d)(2)]:

(i) No Supplier may apply the ratings to obtain material in greater quantities or on earlier dates than required to enable him to make on schedule a delivery rated hereunder or to replace in his inventory material so delivered. He shall not be

deemed to require such material if he can make his rated delivery and still retain a practicable working minimum inventory thereof; and if, in making such delivery, he reduces his inventory below such minimum, he may apply the ratings only to the extent necessary to restore his inventory to such minimum.

(ii) A Supplier may defer applications of the ratings hereunder to purchase orders or contracts for material to be placed by him until he can place a purchase order or contract for the minimum quantity procurable on his customary terms; provided, that he shall not defer the application of any rating for more than three months after he becomes entitled to apply it.

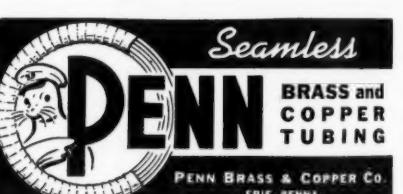
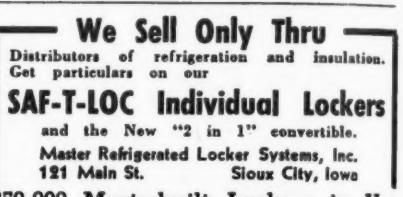
(3) The preference ratings hereby assigned shall not be applied

(i) to obtain any copper, copper base alloy, stainless steel, or alloy steel for use in the manufacture of any material to the delivery of which preference ratings may be applied under this Order, or to replace in the inventory of a manufacturer any copper, copper base alloy, stainless steel, or alloy steel used in the manufacture of any such material;

(ii) to obtain any block tin pipe, unless an equal quantity of scrap tin pipe is return to the fabricator;

(iii) to obtain any babbitt metal

(Concluded on Page 17, Column 1)



We Americans all realize that armament work must come first. Our Government has first claim to the use of our machines, our skill and our manpower.

Since refrigeration accessories are becoming so scarce, you must be sure that those you do obtain will function accurately for a long time.

ALL MUELLER BRASS CO. REFRIGERATION PRODUCTS ARE TIME-TESTED AND DEPENDABLE, and their quality now means more than it ever did before.

To the extent we are permitted and to the capacity we have available, we shall continue to the utmost of our ability to produce standard essentials for the Refrigeration Trade.

Mueller Brass Co. products have a "built-in" reputation for quality.

MUELLER BRASS CO.
PORT HURON, MICH.

Priorities? Deliveries? Substitutes? Get the Answers May 11, 12 at Chicago

Repair Order Lists Restrictions on Use of Preference Ratings

(Concluded from Page 16, Column 5) containing more than 12% by weight of tin;

(iv) to obtain any solder containing more than 30% by weight of tin;

(v) to obtain Material which can be secured when required without such ratings;

(vi) to obtain deliveries greater in quantity, or on dates earlier, than reasonably necessary for emergency service, or emergency service inventory requirements of the Emergency Service Agency;

(vii) to obtain scarce material the use of which could be eliminated without serious loss of efficiency by substitution of less scarce material or by change of design;

(viii) to aid in the conversion of an existing refrigerating system from the use of one refrigerant to another;

(ix) to obtain parts, including (but not limited to) the following for installation with new refrigerating or air conditioning equipment, or for replacement (other than emergency replacement), or for the expansion of existing facilities:

(a) automatic controls, either domestic or commercial;

(b) copper tubing or fittings;

(c) copper tubing or pipe for the manufacture or "winding" of "low sides," or pipe for the manufacture of coils;

(d) suction or liquid line valves whether operated manually, thermostatically, or by pressure;

(e) water control valves whether operated electrically or by pressure;

(f) expansion valves of any description;

(g) complete "low sides" of any classification, including water coolers, carbonated water coolers, and malt beverage coolers;

(h) copper tubing for the fabrication of water or beverage cooling "low sides";

(i) complete "high sides" with or without controls and with or without a motor;

(j) component parts of "high sides" for assembly into a complete unit;

(k) electric motors; or

(l) "flash-type" baffles for the

modernization of existing installations.

Restrictions Upon Application of Preference Ratings.

(1) An Emergency Service Agency shall not apply any preference ratings assigned by paragraph (b) until he

(i) shall have filed with the War Production Board a statement (in triplicate) properly executed, on Form PD-399; and

(ii) shall have received from the War Production Board, a serial number which shall thereafter be endorsed on all purchase orders or contracts for material placed by him which are rated pursuant to this Order.

(2) An Emergency Service Agency, in order to apply the preference ratings assigned hereunder to deliveries to him, must endorse on the original and all copies of each purchase order or contract which is covered by the ratings assigned hereunder, a statement in the following form manually, or as provided in Priorities Regulation No. 7, signed by an official duly authorized for such purpose:

"Preference Rating A- is applied hereto under Preference Rating Order No. P-126, Serial No. , with the terms of which Order the undersigned is familiar, and under which the undersigned is authorized to operate by Certificate No. which has not been revoked.

(Name of Emergency Service Agency)

By (Duly Authorized Official)"

(3) A Supplier in order to apply the preference ratings assigned hereunder to deliveries to him must endorse on the original and all copies of each purchase order or contract which is covered by the ratings assigned hereunder, a statement in the following form manually, or as provided in Priorities Regulation No. 7, signed by an official duly authorized for such purposes:

"Preference Rating A- is applied hereto under Preference Rating Order No. P-126, Serial No(s). The undersigned is familiar with the terms of this Order and has seen the certificate(s) of authority, or properly authenticated copy(ies) thereof, of the Emergency Service Agency(ies)

operating under the above Serial Number(s).

(Name of Supplier)
By (Duly Authorized Official)"

(A Supplier need not add the underlined words in the foregoing endorsement unless he delivers the Material directly to an Emergency Service Agency.)

(4) An Endorsement in the form of subparagraphs (2) or (3) above shall constitute a representation to the War Production Board and the Supplier with whom the purchase order or contract is placed that such purchase order or contract is duly rated in accordance herewith. Such Supplier shall be entitled to rely on such representations, unless he knows or has reason to believe it to be false. Any such purchase order or contract shall be restricted to Material the delivery of which is rated in accordance herewith.

(5) A Supplier who has received from two or more Emergency Service Agencies or Suppliers endorsed purchase orders or contracts for Material to the delivery of which the same rating has been applied in accordance with this Order, may (within the limitations of paragraph (d) hereof) include in a single purchase order or contract any or all of the material which he in turn requires to make such rated deliveries, but must specify in the endorsement on such single purchase order or contract all of the Serial Numbers contained in the purchase orders or contracts which have been so received by him to fill which he is applying the preference rating.

(f) **Records.** An Emergency Service Agency shall retain for two years for inspection by duly authorized representatives of the War Production Board endorsed copies of all purchase orders or contracts placed by him to which he applied the preference ratings assigned hereunder, and also a separate record of each service job in the performance of which he used materials or equipment rated under this Order, including the names and addresses of all his customers with a list of parts and material used on each job. Each Supplier shall also retain for a period of at least two years, for inspection by representatives of the War Production Board endorsed copies of all purchase orders or contracts received by him and rated under this Order, whether accepted or rejected.

(g) **Reports.** Each Emergency Service Agency and each Supplier shall file with the War Production Board such reports as said Board shall from time to time request.

(h) **Communications.** All reports which may be required to be filed hereunder, and all communications concerning this Order, shall, unless otherwise directed, be addressed to:

"War Production Board
Washington, D. C. Ref: P-126"

(i) **Violations.** Any person who wilfully violates any provision of this Order or who by any act or omission falsifies records to be kept or information to be furnished pursuant to this Order may be prohibited from receiving further deliveries of any material subject to allocation, and such further action may be taken as is deemed appropriate including a recommendation for prosecution under Section 35(A) of the Criminal Code (18 U.S.C. 80).

(j) **Revocation or Amendment.** This Order may be revoked or amended at any time as to any Emergency Service Agency or any Supplier. In the event of revocation deliveries already rated pursuant to the provisions of this Order shall be completed in accordance with said rating, unless the rating has been specifically revoked with respect thereto. No additional applications of the rating to any other deliveries shall thereafter be made by the Emergency Service Agency or Supplier affected by such revocation.

(k) **Applicability of Priorities Regulation No. 1.** This Order and all transactions affected thereby are subject to the provisions of Priorities Regulation No. 1 as amended from time to time, except to the extent that any provision of this Order may be inconsistent therewith, in which case such provision shall govern.

(l) **Effective Date.** This Order shall take effect on the date specified in the heading hereof, and unless sooner revoked, shall expire on the 30th day of June, 1942.

Issued this 20th day of April, 1942.
J. S. Knowlson,
Director of Industry Operations

Service Parts Co. Now A Member of NRSJA

CHICAGO—Service Parts Co. of Melrose Park, Ill. has just become a term member of the National Refrigeration Supply Jobbers Association.

High Ratings Granted For Repairs In Dairies

(Concluded from Page 1, Column 4) issuance of an A-3 rating.

The rating may be applied by persons engaged in processing or producing dairy products in Canada, provided a copy of the order is specifically issued to them.

A number of restrictions are placed on the uses to which the ratings can be put. These include:

If material is required for replacement purposes, processors must first advise WPB on Form PD-414 and obtain specific authorization before an A-3 rating can be applied.

As soon as a processor places an order for materials to be delivered with the assistance of an A-2 rating, he must telegraph WPB complete information on the necessity for the order and the type and cost of the material involved.

The A-2 rating cannot be used to replace materials withdrawn from existing inventories and the A-3 rating cannot be used for that purpose if the result would be an increase in inventories above a minimum necessary to maintain operations.

The customary restrictions are placed on the use of the ratings by suppliers, such as inventory controls. Both processors and suppliers must file reports on Form PD-413.

The order expires June 30, after which, says the WPB, it is expected that processors will obtain their materials under the Production Requirements Plan.

Under the terms of the order "processor" means any person engaged in one or more of the following capacities:

(1) pasteurizing milk,

(2) receiving milk from other persons for cooling preparatory to shipment for further processing,

(3) producing dairy products, for sale, by processing milk or cream in a plant not located on the farm where the milk was produced.

"Supplier" is defined as any person with whom a contract or purchase order has been placed for delivery of material to a processor or supplier.

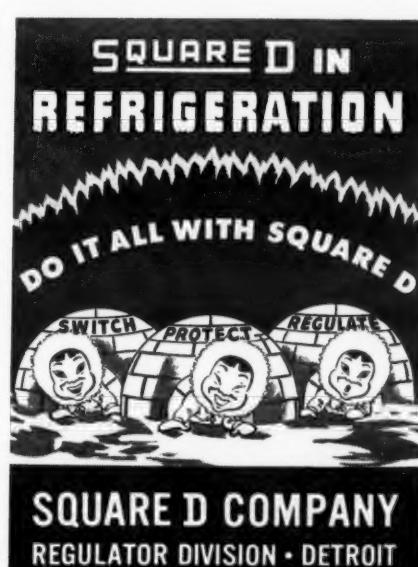
Requisitioning Branch In First 'Force' Case

WASHINGTON, D. C.—The Inventory and Requisitioning Branch of WPB moved recently to take over a quantity of aluminum, which its owners had refused to sell at prices established by the WPB. This was the first action of the kind to become necessary since the inauguration in February of a nation-wide campaign to salvage all idle stocks of aluminum in fabricators' hands.

J. Clem Kline & Son, of Easton, Pa., in filing their report of stocks on hand, had claimed that 1,000 pounds of high grade commercial aluminum ingot in their possession were required to fill rated orders. Subsequent investigation disclosed that the material was not needed for this purpose and the requisitioning orders were drawn up.

Other cases of refusal to sell are being studied by the Branch, and it is expected that the WPB's requisitioning authority will be invoked.

Since the beginning of the program to purchase idle aluminum, the Inventory Section of the Branch has received replies from half of the 1,000 fabricators circularized.



Service is in the Balance

THE OLD ADAGE, "A product is only as good as the service it renders," is trite in normal times. During the present emergency it is taking on added significance.

New refrigerating units and refrigerators are going to be increasingly difficult to obtain—our country's production facilities must be turned primarily toward the one great purpose—to defeat our enemies.

Because the Tecumseh Products Company has always stressed the manufacture of precision built compressors and condensing units, the added years of trouble free service are extra insurance to the Chieftain user. And, after long years of faithful service, the Chieftain unit may be repaired with genuine Chieftain exact replacement parts. Or the Chieftain compressor body may be rebuilt, "good as new," in our factory at nominal cost.

Chieftain will take care of its users during the emergency.

TECUMSEH PRODUCTS CO.

TECUMSEH,
MICHIGAN



Chieftain

Meet us at the
STEVENS HOTEL
for the
"ALL INDUSTRY
CLINIC"
MAY 11th to
MAY 13th

MEET US HERE...



FOR THE

ALL INDUSTRY CONVENTION

MAY 11, 12, 13

OUR BOOTH NUMBER

No. 104

TEMPRITE PRODUCTS CORP.

47 Piquette Ave.

DETROIT

MICHIGAN

Originators of Instantaneous

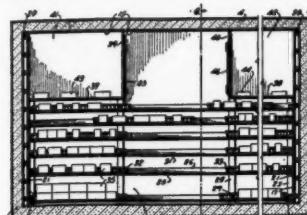


Liquid Cooling Devices

Patents (Cont.)

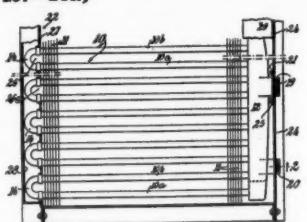
(Concluded from Page 18, Column 5) on one end with the other end open for communication with a return conduit.

2,278,021. CABINET. Walter A. Reich, Kansas City, Mo. Application Feb. 24, 1940, Serial No. 320,605. 2 Claims. (Cl. 312—119.)



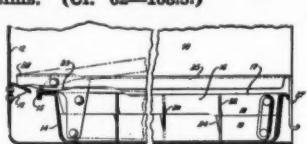
1. In a refrigerated container of the character described, an enclosing frame, a compartment in the frame having storage and dispensing spaces therein, a closure mounted in the frame to provide access to the dispensing space, a display compartment in the frame above the storage space, a transparent panel in the frame adjacent the closure for permitting view of the displayed articles, said display compartment being wholly enclosed to prevent light in the display compartment from entering the storage space, a plurality of racks in the storage space below the display compartment and having portions extending into the dispensing space, and trays supported on the racks and individually movable from the storage space to the dispensing space adjacent the closure for removal therethrough of articles carried on the trays.

2,278,086. EXTENDED SURFACE HEAT EXCHANGER. Edward S. Lee, Morrisville, Pa., assignor to Buensold-Stacey Air Conditioning, Inc., New York, N. Y., a corporation of Delaware. Application Jan. 2, 1940, Serial No. 312,007. 5 Claims. (Cl. 257—144.)



1. A heat exchange unit including a plurality of heat transfer tubes, each comprising a pair of substantially straight leg portions and a return bend portion, and supply and discharge headers arranged in substantially superposed relation, said tubes having their return bend portions and substantially all of their leg portions arranged in a single row, which is horizontally disposed, each of said tubes having one leg portion connected to said supply header and the other to said discharge header with one of said legs having a short end portion disposed at an angle to the remaining portion to facilitate its connection to the appropriate said headers.

2,278,221. REFRIGERATION. Arnold D. Siegle, Canton, Ohio, assignor to The Hoover Co., North Canton, Ohio. Application Sept. 5, 1939, Serial No. 293,396. 5 Claims. (Cl. 62—108.5.)



1. In combination with an evaporator of a refrigerator having a support for an ice tray, an ice tray positioned on said support, a grid assembly removably positioned in said tray and means carried by said grid assembly to cooperate with said evaporator for raising the tray from the support, said means being so constructed as to raise said grid assembly and attached cubes from the tray and separate the attached cubes from the grid assembly.

2,278,229. REFRIGERATION. Uncas A. Whitaker, New York, N. Y., assignor to The Hoover Co., North Canton, Ohio. Application Sept. 21, 1939, Serial No. 295,845. 16 Claims. (Cl. 62—32.)

1. In combination with a refrigerator cabinet having a freezing compartment with a supporting shelf, an ice tray positioned on said shelf, means carried by said tray for raising said tray from said shelf,

manually operable means on the exterior of said cabinet and hydraulic means for transmitting movement from said manually operable means to said tray-raising means.

2,278,378. REFRIGERATION. Curtis C. Coons, North Canton, Ohio, and Randolph S. Nelson, Larchmont, N. Y., assignors to The Hoover Co., North Canton, Ohio. Application Aug. 4, 1938, Serial No. 283,288. 10 Claims. (Cl. 62—119.5.)

1. In combination with a refrigerator cabinet having a storage compartment and a cooling air passageway extending along said compartment exteriorly thereof, of an absorption refrigeration apparatus having heat dissipating portions located in said cooling air passageway and heat absorbing portions located in heat exchange relation with said storage compartment, said apparatus being characterized by the provision of an evaporator, a boiler, an absorber, conduits connecting said evaporator and absorber in

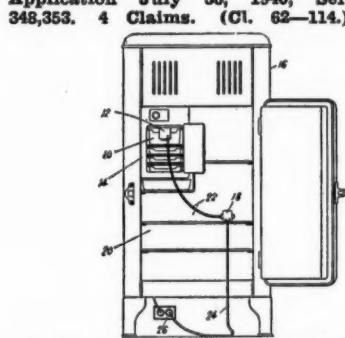
a closed inert gas circuit, power actuated means for forcibly circulating inert gas

in said circuit, means providing an absorption solution circuit between said boiler and said absorber, means for bypassing a part of the gas from said inert gas circuit to said solution circuit to promote the circulation of the absorption solution, said absorber comprising a plurality of conduits which have a straight major portion and a bent minor portion at one end, heat dissipating fins on said straight portions, the straight ends of said conduits being joined to the bent ends in such manner as to provide an absorber having a continuous fluid passageway from one end thereof to the other which is inclined slightly to the horizontal substantially throughout its length, and means within said absorber for causing the inert gas to pass therethrough in a swirling path as it is forcibly circulated by said power actuated means.

2,278,422. THERMOSTATIC VALVE DEVICE. Clyde A. Brown, Chicago, Ill., assignor to The Dole Valve Co., Chicago, Ill., a corporation of Illinois. Application July 1, 1940, Serial No. 343,364. 7 Claims. (Cl. 236—34.)

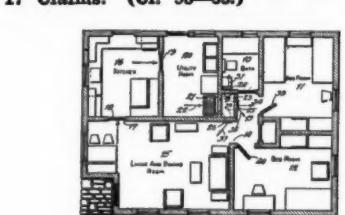
1. A thermostatic valve device comprising a casing, a valve mounted therein, a thermostatic element connected with said valve, to move it to its open position when a predetermined temperature is reached, and a stop for holding said valve in an open position, after the parts are cool, when an abnormal temperature is reached during the operation of the device, said stop actuated by and moved into its operative position by the thermostatic element.

2,278,617. REFRIGERATOR ICE CREAM FREEZER. Leroy H. Knibb, Sabot, Va. Application July 30, 1940, Serial No. 348,533. 4 Claims. (Cl. 62—114.)



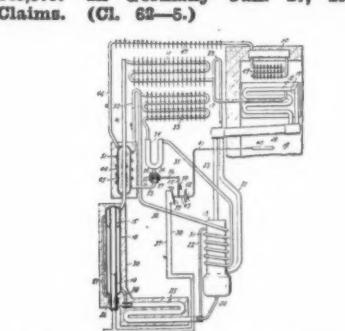
1. An ice cream freezer agitator unit comprising rigidly connected pairs of plates with the connected plates of the different pairs forming relatively movable sub-units, one plate of each sub-unit being disposed between the plates of another sub-unit, and an operating shaft extending through all of the plates to rigidify the unit, the shaft also having operative connections with the plates to cause the sub-units to oppositely reciprocate within a container for a freezing mixture.

2,278,843. HEATING AND AIR CONDITIONING METHOD AND APPARATUS. Rogers Hollansbee, Evanston, Ill. Application March 31, 1941, Serial No. 386,057. 17 Claims. (Cl. 98—33.)



1. A method of air conditioning an enclosure which is divided into separate areas by the usual partition structures and which areas communicate with each other through openings in the partition structures, which method comprises discharging a forced stream of conditioned air into a first area of the enclosure to cause the resulting excess air from said first area to spill out of said first area through one of said openings into a communicating second area, simultaneously discharging another forced stream of conditioned air into said area to entrain and mix with said spilled out air in said second area, withdrawing from said second area through another communicating opening a volume of air substantially equal to the total volume of conditioned air discharged in said streams, moving said volume of air through another area of said enclosure which communicates with said second area to condition said other area, and conditioning said volume of air after said movement through said other area, said conditioned air thereafter being forceably discharged to produce said forced streams in said first two mentioned areas.

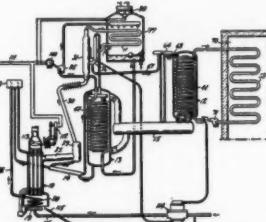
2,278,998. REFRIGERATION. Wilhelm Georg Kogel, Evansville, Ind., assignor, by mesne assignments, to Servel, Inc., New York, N. Y., a corporation of Delaware. Application Dec. 14, 1938, Serial No. 245,579. In Germany Jan. 17, 1938. 11 Claims. (Cl. 62—5.)



3. The combination with a refrigeration system having at least two parts from which heat is dissipated, of an intermittent refrigeration system operated by heat input from one of said parts from which heat is dissipated, a fluid transfer system in which a heat transfer fluid is adapted to flow and including one portion in heat exchange relation with said intermittent system and another portion in heat exchange relation with another portion

of said parts, and control means to flow heat transfer fluid alternately in said portions.

2,279,017. REFRIGERATION. Hugo M. Ullstrand, Evansville, Ind., assignor to Servel, Inc., New York, N. Y., a corporation of Delaware. Application April 7, 1938, Serial No. 200,574. 5 Claims. (Cl. 62—5.)

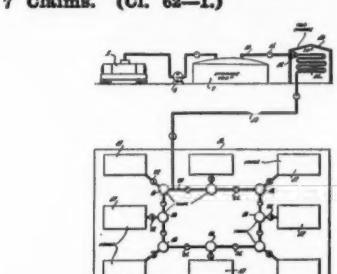


1. An absorption type refrigeration system including a generator, a heater for said generator, a control for stopping and starting said heater, an absorber, a condenser, a liquid circuit for cooling said absorber and condenser and including an evaporator, a liquid circulator for circulating liquid in said circuit, and a second control for stopping and starting said liquid circulator responsive to the stopping and starting, respectively, of said heater.

2,279,049. FREEZING EVAPORATOR. Walter Kleinow, Hennigsdorf, Kreis Osthavelland, Germany, assignor to General Electric Co., a corporation of New York. Application Sept. 5, 1940, Serial No. 355,539. In Germany Oct. 31, 1939. 3 Claims. (Cl. 62—126.)

1. An evaporator for a refrigerating machine having a substantially vertical freezing and air cooling surface, a freezing tray having a vertical side wall adapted to engage said freezing surface, and interengaging elements on said tray and on said evaporator adjacent the ends of said tray for detachably securing said tray in good thermal contact with said surface, whereby upon removal of said tray said freezing surface presents substantially uninterrupted area affording a free circulation of air over said surface.

2,279,097. COMMUNITY REFRIGERATION AND GAS SYSTEM. Virgil Stark, Forest Hills, Long Island, N. Y. Application Aug. 18, 1941, Serial No. 407,349. 7 Claims. (Cl. 62—1.)



5. The herein described method of refrigeration and gas distribution which consists in the steps of storing liquefied gas under pressure, reducing the pressure on the gas, passing the gas to a plurality of connected individual accumulators adjacent specific points of use, and further reducing the pressure on the gas between any accumulator and its adjacent point of use.

2,279,272. REFRIGERATING APPARATUS. William B. Anderson, West Springfield, and Elliott E. Grover, Springfield, Mass., assignors to Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa., a corporation of Pennsylvania. Application Dec. 16, 1939, Serial No. 309,554. 4 Claims. (Cl. 62—116.)

1. In a mechanical refrigerator, the combination of a cabinet comprising an insulated chamber, an evaporator associated therewith for cooling said chamber, a compressor for withdrawing refrigerant vapor from the evaporator and compressing said vapor, and a condenser comprising a sheet of metal and a convoluted metal tube bonded integrally and substantially throughout its length to the surface of said sheet to provide a good metallic heat-conducting path therebetween, said plate being secured to an outer wall of said cabinet, said compressor discharging the compressed vapor into said tube to liquefy the vapor.

REISSUE

22,058. AIR CONDITIONING UNIT. Kemper Penn Brack, South Bend, Ind., assignor, by mesne assignments, to Servel, Inc., New York, N. Y., a corporation of Delaware. Application Dec. 14, 1938, Serial No. 245,579. In Germany Jan. 17, 1938. 11 Claims. (Cl. 62—5.)

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Get the Story First Hand from Your Suppliers at Chicago Clinic

Stepped Up



P. Y. DANLEY

Order on Plumbing Equipment Freezes Much 'Hard Goods'

(Concluded from Page 1, Column 4) of existing plumbing and heating equipment stocks for non-defense building, modernization, or unnecessary replacements, the War Production Board is freezing all such stocks, except for retail sales of \$5 or less, or for any sale on an A-10 or better preference rating.

"The order (L-79) covers all new plumbing and heating equipment, including any equipment, fixture, fitting, pipe, or accessory of a type used in or connected to a water, sewer, or gas system; or any primary heating unit or accessory designed to provide building warmth.

"The order does not cover used plumbing and heating equipment, or tools used for installation and repair, or hoses, sprinklers, and similar devices commonly attached to outdoor faucets.

"In effect, the order prevents the

BULLETIN!

WASHINGTON, D. C., April 23—Gas cooking stoves are subject to the terms of Limitation Order No. L-79, covering sales and deliveries of plumbing and heating equipment, it was explained today by W. Walter Timmis, Chief of the WPB Plumbing and Heating Branch.

Mr. Timmis pointed out that gas ranges are covered by paragraph (1) of the definitions contained in the order. This definition reads as follows:

"Plumbing Equipment" means any equipment, fixtures, fitting, pipe, or accessory of a type used in, or connected to, a water, sewer, or gas system; provided, that "Plumbing Equipment" does not include any tool for use in installation or repair, or any hose, sprinkler, or other device of a type commonly attached to an outdoor faucet."

Gas cooking stoves, and other plumbing and heating items covered by the order, may not be sold except on orders bearing A-10 or better preference ratings.

sale or delivery by a dealer or any other person of furnaces, oil burners, coal stokers, and a wide range of other plumbing and heating equipment if the item is to be used for non-essential purposes.

The general restrictions of the freeze order prohibit the sale or delivery of new plumbing and heating equipment to any person, except that:

1. Retailers may sell or deliver items being sold for no more than \$5.

2. Sale and delivery on orders bearing an A-10 or better preference rating is permitted.

3. Retailers may sell or deliver to other retailers, and to distributors, jobbers, wholesalers, or manufacturers of plumbing and heating equipment.

4. Distributors, jobbers, and wholesalers may sell and deliver to any jobber, or to other wholesalers, distributors, or manufacturers.

5. Any new plumbing and heating equipment actually in transit on the date of issuance of the order may be delivered to its immediate destination.

6. Any person may sell to a purchaser who certifies that the item is necessary for the installation of specifically listed farm machinery and equipment.

Danley and Hildreth Win Promotions

(Concluded from Page 1, Column 1) sales has been announced by T. J. Newcomb, division sales manager. Both men will continue to make their headquarters in the Springfield plant.

Mr. Danley continues as head of war products of the merchandising division, a position he has held since August, 1941. In this capacity, he reports directly to J. H. Ashbaugh, manager of the merchandising division. Mr. Danley will direct merchandise sales activities carried on from the Springfield works.

Before taking the war products assignment last August, Mr. Danley was manager of the Westinghouse air conditioning and commercial refrigeration sales at Springfield.

Prior to that he was stationed in Mansfield, first as assistant sales manager and later as manager of the refrigeration and air conditioning department. He has been associated with Westinghouse for 29 years, starting as a student in the East Pittsburgh works after his graduation from University of Pittsburgh in 1913.

Mr. Hildreth has been sales development manager of the department he now heads since July, 1941.

He joined Westinghouse in 1920 as student engineer in the East Pittsburgh works, after his graduation in mechanical engineering from Pratt University, Brooklyn. He was engaged in Westinghouse central station engineering and sales until 1936, when he came to the merchandising division in Mansfield, as air conditioning supervisor of the central district.

In June, 1938, he became manager of the home heating department of the division, going to Springfield in that year. He was in this work until he became sales development manager of the commercial refrigeration and air conditioning department in 1941.

Georgia Power Enlarges Its Commercial Store

ATLANTA—A recent open house announced the doubling of the size of the Georgia Power Co.'s commercial store here.

Order on Plumbing Equipment Freezes Much 'Hard Goods'

preference-rated orders with manufacturers, dealers, and others."

Text of the Order is as follows:

Section 1154.1—GENERAL LIMITATION ORDER NO. L-79.

(a) Definitions. For the purposes of this Order:

(1) "Plumbing Equipment" means any equipment, fixture, fitting, pipe, or accessory of a type used in, or connected to, a water, sewer, or gas system; provided that "Plumbing Equipment" does not include any tool for use in installation or repair, or any hose, sprinkler, or other device of a type commonly attached to an outdoor faucet.

(2) "Heating Equipment" means any primary heating unit of a type used to provide building warmth and any accessory or appurtenance of a type used in connection with such a primary heating unit.

(3) "New Plumbing or Heating Equipment" means any Plumbing Equipment or Heating Equipment which has never been used by an ultimate consumer.

(b) General Restrictions. From and after the effective date of this Order no Person shall sell or deliver any New Plumbing or Heating Equipment to any other Person except that:

(1) any retail dealer of Plumbing Equipment or Heating Equipment may sell and deliver any item of New Plumbing Equipment or Heating Equipment which item is sold by him for no more than five dollars (\$5.00);

(2) any Person may sell and deliver any New Plumbing Equipment or Heating Equipment pursuant to an order or contract which bears a preference rating of A-10, or better;

(3) any retail dealer of Plumbing Equipment or Heating Equipment may sell and deliver any New Plumbing Equipment or Heating Equipment or to any distributor, jobber, wholesaler, or manufacturer of Plumbing Equipment or Heating Equipment,

(4) any distributor, jobber, or wholesaler of Plumbing Equipment or Heating Equipment may sell and deliver any New Plumbing Equipment or Heating Equipment

ment to any other distributor, jobber, or wholesaler of Plumbing Equipment or Heating Equipment and to any manufacturer of Plumbing Equipment or Heating Equipment,

(5) any New Plumbing Equipment or Heating Equipment actually in transit on the date of the issuance of this Order may be delivered to its immediate destination, and

(6) any Person may sell and deliver to any other Person any New Plumbing Equipment or Heating Equipment concerning which that Person makes the following signed statement to him, listing all New Plumbing Equipment or Heating Equipment sold or delivered:

"The following Equipment is necessary for the installation of one or more of the following items of farm machinery and equipment: milk machines, water cooled engines, cream separators, milk coolers, butter making equipment, water pumps, livestock individual drinking cups, livestock watering bowls, hog troughs, stock tanks, stock tank heaters, incubators, brooders, poultry waterers, and beekeepers' supplies.

Date Signed

This statement shall constitute a representation to the War Production Board and to the Person supplying such equipment that the listed equipment will be used for the purpose stated.

(c) Records. All Persons affected by this Order shall keep and preserve for not less than two years accurate and complete records concerning inventories and sales. Similarly there shall be kept and preserved the signed statements referred to in paragraph (b)(6) above.

(d) Audit and Inspection. All records required to be kept by this Order shall, upon request, be submitted to audit and inspection by duly authorized representatives of the War Production Board.

(i) Routing of Correspondence. All reports to be filed, appeals, and other communications concerning this Order shall be addressed to: "War Production Board, Washington, D. C., Ref: L-79."

Issued this 16th day of April, 1942.
J. S. Knowlson,
Director of Industry Operations

CLASSIFIED ADVERTISING

RATES for "Positions Wanted," 5¢ per word; minimum charge, \$2.50. Three consecutive insertions, 12½¢ per word; minimum charge \$6.25.

RATES for all other classifications, 10¢ per word, minimum charge, \$5.00 per insertion. Three consecutive insertions, 25¢ per word, minimum charge, \$12.50.

ADVERTISEMENTS set in usual classified style. Box addresses count as five words, other addresses by actual word count.

POSITIONS AVAILABLE

SERVICE AND INSTALLATION men (two) wanted for Detroit. Good hourly rate plus car allowance. Opportunity for real earnings. Give age, experience, and full details. Replies confidential. Box 1395, Air Conditioning & Refrigeration News.

COMMERCIAL REFRIGERATION and air conditioning service and installation men living in New England, New Jersey, Pennsylvania, and as a matter of fact in any part of the United States and who are seeking permanent employment in New York City (Manhattan) on a wage scale in line with present high living costs please apply at once, stating full qualifications in first letter. Advertiser is one of the largest and best financed refrigeration companies in metropolitan New York. All correspondence kept strictly confidential. Box 1396, Air Conditioning & Refrigeration News.

FRANCHISES AVAILABLE

DIRECT FACTORY CONNECTION: Sell refrigerator display cases, reach-in refrigerators, walk-in coolers, compressors, beer and bottle coolers, to meat markets, grocers, taverns, etc. Financing arrangements to help sell. For catalog and selling information write or see EHRLICH REFRIGERATOR MFG. CO., St. Joseph, Mo.

Service Flashes

VOLUME 1

Published in the Interest of Equipment Conservation through More Effective Servicing

The Effect of Excess or Shortage of Refrigerant—and its Detection

SHORTAGE OF REFRIGERANT. A shortage of refrigerant may cause unusual effects depending on other circumstances. On commercial jobs controlled by a pressure switch a slight shortage usually causes the machine to run too long and results in temperatures being colder than normal. However, if the expansion valve is not sufficiently oversized to pass the uncondensed gas the result is a slightly starved evaporator.

Thus, a slight shortage may pass unnoticed except for a higher power bill. A real shortage, of course, causes loss of refrigeration along with either high or low suction pressure, depending on whether the liquid line and the expansion valve are sufficiently oversized to pass the uncondensed gas.

A shortage of refrigerant can be detected by:

A. Liquid line warmer than normal, especially where it enters expansion valve.

B. Head pressure lower than normal. This is not always a dependable indication unless you happen to know what the pressure is supposed to be.

C. Distinct hissing sound at the expansion valve.

D. Sight glasses are the one sure way of detection.

EXCESS REFRIGERANT. Excess refrigerant increases head pressure and reduces compressor capacity causing long operation and possibly warm evaporator. May cause damage to motor if it is not properly protected by overload cut-out.

Noncondensable gas in the system may cause this same condition. After blowing out noncondensable gas check for shortage of refrigerant.

Detection:

A. High head pressure.

B. High temperature at compressor discharge, with cold condenser and receiver.

The paragraphs above and chart below are particularly for commercial systems using thermostatic expansion valves and controlled by a pressure switch.

Reprints of this—the first of a series of helpful hints—will be supplied upon request.

SYMPTOMS					PROBABLE CAUSE
Condition of Job	Evaporator Condition	Running Time	Suction Pressure	Suction Line Temperature	
Warm	Warm	Won't Start	Low	Warm	Complete loss of Charge
Warm	Warm	Continuous	High	Warm or Normal	Too Much or Too Little Refrigerant
Warm or Normal	Starved or Partly Refrig.	Short Cycle	Low	Warm	Shortage of Refrigerant
Normal or Too Cold	Cold	Continuous or Too Long	Normal or Low	Normal	Too Much or Too Little Refrigerant

The Refrigeration Equipment Manufacturers Association Will Hold Their
ALL INDUSTRY CONVENTION AND CONFERENCE BOOTH CLINIC
on MAY 11th—12th 1942
at the STEVENS HOTEL CHICAGO, ILL.

DETROIT LUBRICATOR COMPANY

General Offices: DETROIT, MICHIGAN

Canadian Representatives: Railway & Engineering Specialties Ltd., Montreal, Toronto, Winnipeg